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ABSTRACT

THIS IS VOLUME II OF A STUDY MADE BY A STATE COMMISSION IN VIRGINIA TO DETERMINE THE VOCATIONAL NEEDS OF THE STATE TO 1975. RECOMMENDATIONS WERE MADE BY THE COMMISSION AND A SET OF PRIORITIES WAS ESTABLISHED. A THOROUGH STUDY WAS MADE OF PERSONS IN THE VARIOUS DISABILITY CATEGORIES AND OF THE PREVALENCE OF THOSE WHO WERE ELIGIBLE FOR STATE AID. ABOUT 490,000 HAD SOME DISABILITY IN 1965. MENTAL RETARDATION (128,000), CARDIAC (100,000), AND ORTHOPEDIC (93,800) WERE THE MOST FREQUENTLY MENTIONED. OF THE TOTAL, AROUND 103,000 WERE ELIGIBLE FOR STATE AID. THE PLANNING ORGANIZATION AND METHOD OF OPERATION ARE OUTLINED IN DETAIL, AS WELL AS THE FINDINGS AND RECOMMENDATIONS. MANY TABLES WHICH PROVIDE DATA ABOUT THE REHABILITATION POPULATION, PROGRAMS, AND SERVICES ARE INCLUDED IN THE REPORT, AND A SELECTED BIBLIOGRAPHY IS APPENDED. VOLUME I WHICH PROVIDES INFORMATION ON THE VARIOUS RECOMMENDATIONS, REASONS FOR RECOMMENDATIONS, AND THE PLANNING ORGANIZATION IS AVAILABLE AS VT 010 284. (BC)

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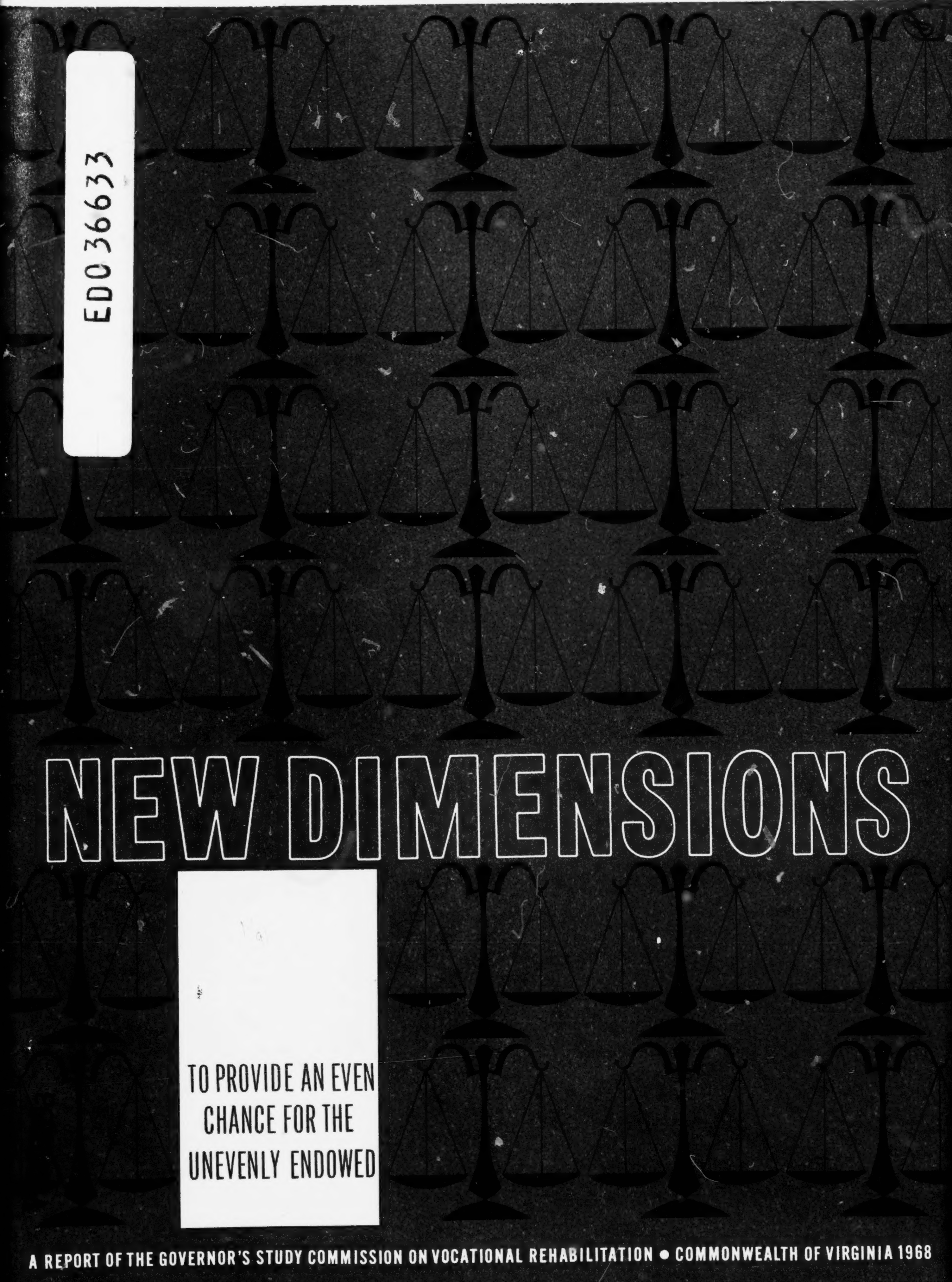

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A REPORT OF THE GOVERNOR'S STUDY COMMISSION ON VOCATIONAL REHABILITATION • COMMONWEALTH OF VIRGINIA 1968

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FINAL REPORT OF THE GOVERNOR'S STUDY COMMISSION ON VOCATIONAL REHABILITATION IN VIRGINIA

Volume II

COMPREHENSIVE STATEWIDE PLANNING FOR VOCATIONAL REHABILITATION SERVICES

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OCTOBER 1968

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PLANNING FOR VOCATIONAL REHABILITATION IN VIRGINIA

1968-1975

Final Report

Volume II

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December 2, 1968

The Honorable Mills E. Godwin, Jr.
Governor of Virginia
Richmond, Virginia 23223

Dear Governor Godwin:

Herewith your Study Commission on Vocational Rehabilitation in Virginia submits its report.

This undeniably extensive report is presented in two volumes for completeness and clarity. The recommendations are briefed in Volume I with references to supporting data in Volume II.

To the members of the Commission your Chairman extends deep appreciation for the devotion, dedication and long hours they have applied to this task. It has been a rigorous assignment, but most rewarding and inspiring.

To the Project Director, Dr. Edward Cooke, and the loyal members of his administrative staff, go thanks for their intelligent and tireless application to their responsibilities.

To the Research Director, Dr. Lewis Bowman, and the members of his staff, is extended gratitude for their zeal, thoroughness and judgment. The broad scope of this research is evident in the prodigious amount of factual information provided.

Your Commission is grateful for the opportunity of serving. It is our prayer that this report will contribute in some measure, to the institution of a program in Virginia that is designed to meet the vital needs...both economic and humanitarian...of our handicapped citizens.

Sincerely,

Louis Spilman

Louis Spilman, Chairman

LS/am

IV/V

ABBREVIATIONS USED IN THE REPORT

ADC — Aid to Dependent Children
AFES — Armed Forces Examining Station
AFL-CIO — American Federation of Labor and Congress of Industrial Organizations
AIA — American Institute of Architects
APTD — Aid to the Permanently and Totally Disabled
ASA — American Standards Association
CAMPS — Cooperative Area Manpower Planning Systems
CVH — Commission for the Visually Handicapped
DVR — Department of Vocational Rehabilitation
ETV — Educational Television
FY — Fiscal Year
IQ — Intelligence Quota
MDTA — Manpower Development Training Act
NEC — Not Elsewhere Classified
NORH —National Orthopedic Rehabilitation Hospital
NYC — Neighborhood Youth Corps
OEO — Office of Economic Opportunity
REHAB. — Rehabilitation
SSDB — Social Security Disability Beneficiary Program
SSDI — Social Security Disability Insurance
U.S.H.E.W. — United States Health, Education, and Welfare
VALC — Virginia Advisory Legislative Council
VEC — Virginia Employment Commission
VR — Vocational Rehabilitation
VSDB — Virginia School for the Deaf and Blind in Staunton, Virginia
VSSH — Virginia State School at Hampton, Virginia
WWRC — Woodrow Wilson Rehabilitation Center, Fishersville, Virginia

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FOREWORD

It has been estimated that it takes about fifty years for sound ideas to be accepted and put into practice. It has taken much longer than this for disabled people to be provided with the services they need. While it is generally recognized and agreed that services to the disabled are worthy of consideration, the lag between the actual provision of services and what is known about the delivery of services is indeed wide. Fortunately, for everyone concerned with the problem, some progress has been made in serving the disabled. At one time in the history of mankind, the imperfect person was killed. This solved the problem of the disabled but did little toward raising the standards of society.

Later, during the Middle Ages, the physically impaired were allowed to live but were the object of ridicule and scorn. During the Renaissance Period, the disabled were cared for in asylums and physical deformity was confused with mental illness. It was not until the Eighteenth Century that any social interest was shown in the welfare of the disabled. This consisted primarily of custodial care. During the Nineteenth Century the first efforts were made to educate the physically handicapped. With the Twentieth Century came the realization that total rehabilitation was possible and was necessary to enable the disabled to become self-supporting and independent.

The concept of a federal-state relationship of vocational rehabilitation is now forty-eight years old, having its start in 1920. Vocational rehabilitation in Virginia is slightly older than the enactment of federal legislation to assist the various states in developing a program of services for the disabled. Prior to July 1, 1964, vocational rehabilitation was a part of the Virginia Department of Education. The Virginia Department of Vocational Rehabilitation was created by the General Assembly in 1964 and began operating as a separate department of government on July 1 of that year.

While tremendous increases have occurred in appropriations of state and federal monies, in staff, in new programs, in location of new offices, and more importantly, the number of disabled served and rehabilitated since 1964, the number of persons becoming disabled each year in Virginia exceeds the number rehabilitated.

The history of the development of vocational rehabilitation clearly shows that most of the important advances and thrusts have followed closely on the heels of some national emergency. The beginning of rehabilitation in 1920 came about as a result of the first World War. The first act was narrow in scope, in that it provided for vocational training, counseling, and placement. In 1935, when the nation was recovering from the effects of the depression, vocational rehabilitation became a permanent part of government. It was during this year that the Supreme Court settled the question of the constitutionality of the federal government expending public funds (and to tax) under the general welfare clause of the Constitution (Article I, Section 8). The Court stated:

> . . . Nor is the concept of the general welfare static. Needs that were narrow or parochial a century ago may be interwoven in our day with the well-being of the nation. What is critical or urgent changes with the times.

The next important legislation came in 1943, during the second World War. This new legislation broadened the meaning of vocational rehabilitation in that physical restoration services to remove or to ameliorate physical disabilities were permitted as well as services to the mentally handicapped. Significant legislation was passed in 1954 in which the overall program in vocational rehabilitation was substantially strengthened. Legislatively, perhaps the real breakthrough for vocational rehabilitation came about in 1965. One aspect of this legislation enabled each of the states to apply for a federal grant to conduct a comprehensive study of the rehabilitation needs of the state. It was through this grant that Virginia conducted its study. The results and recommendations of this study are found in the pages that follow.

Accordingly, the Governor appointed an eighteen member Governor's Study Commission on Vocational Rehabilitation. Members of this Commission represented the geographic regions of the State and in their private lives are representative of a wide array of disciplines.

At first glance it may appear that the projected program is unrealistic in terms of sound fiscal planning for the state. A closer scrutiny of the facts presented in what follows should tend to dispel many of these fears. There is almost universal agreement that providing needed services to the handicapped is an expensive and oft-times frustrating goal. Not providing needed services is more expensive by any criterion that may be selected. By not providing needed services, Virginia is indulging in a luxury that can no longer be afforded. From a statistical, fiscal and historical fact, Virginia has gotten more than its money's worth from every dollar spent on rehabilitating handicapped persons. Returns from money invested in rehabilitation are evidenced on every hand by productive, contributing-taxpaying-citizens, and in reduced welfare payments. It is quite possible and feasible to measure in fairly accurate terms the economic returns of rehabilitation. Through a system called Planning-Programming-Budgeting it is possible to quantify the economic returns with a high degree of specificity. Indeed many governmental agencies operating in the wide realm of social welfare are now employing such a method. The values of rehabilitation both monetary and human, are no longer subject to debate. It should not be necessary to argue the values but concentrate on situations that will best do the job at hand. The results, in the final analysis, will show the performance.

Aside from the economic benefits that accrue from rehabilitating the handicapped, the humanitarian values that evolve are perhaps even more important. The changes that come about in the self-concept of the individual affects the entire family in a positive manner. Happily, it is now recognized that rehabilitation is a family affair. Legislation enacted at the federal level in 1968 recognizes these phenomena. The emergence of the concept that rehabilitation is an investment in human resources is a step in the right direction.

By nature mankind wants to be occupied with some worthwhile undertaking. He must do this if he is to avoid frustration and anomie that abounds so freely. The individuals who participated in this study had no vested interest, other than doing something for the good of mankind. This was true of all persons—the Commission Members, Task Force Members, those who participated in the public hearings, and the paid staff members. At no point in the study did the two agencies involved, the Department of Vocational Rehabilitation and the Commission for the Visually Handicapped, show any inclination to influence the direction or the final results of the study. Rather, the attitude of the two agencies was one of complete interest and cooperation.

The results of the study and the recommendations which follow is a starting point only. It is not within itself an end. It may be one of the vehicles used to reach the end. In a rapidly changing world, especially in the social realm, long-range projections may be of questionable value and vulnerable to attack. At the same time it must be realized that planning is the very foundation of any organization. In a growing organization, plans must be flexible. A plan that is not adaptable and amenable to change is not a very good plan in the first place. The instrument for making these changes is that of continuous planning. It is the process of gradually replacing that which can be better done by newer and more efficient methods. Vocational rehabilitation will grow in many directions. In all probability programs unheard or unthought of today may very well be the commonplace within the next several years. A trend in this direction has already started. Vocational rehabilitation is no longer concerned only with the physically disabled. Legislation passed in 1965 and 1968 requires that a greater and different population be served. Ways and means of serving a different class of disabled is clearly indicated. In addition to serving the physically disabled and the mentally retarded, persons who are drug addicts, alcoholics, and those who are handicapped because of social, educational, economic and cultural conditions also must be served.

Criticism is heard from time to time about the overlapping functions of governmental agencies and the duplication of services by both public and private agencies. No single agency, either public or private, has the sole responsibility for providing all the services to disabled persons. In the final analysis it matters not so much who does the serving, but how it is done, how quickly, and at what cost to the citizens. The uniqueness of an organization may well dictate which agency is in the best position to do a particular job.

Planning is the process of selecting and determining priorities and alternatives. This report is not the final word. It is subject to change as prevailing conditions and circumstances change. Without this postulate, no report is very good.

There are many obstacles to meet and to overcome in the process of implementing a new or expanding an old program. The problem of adequate financing is present always. But money is not the only stumbling block. The problem of manpower to do the job looms high on the list of problems.

One final word—the findings of this study are what was actually found out during the course of research. The conclusions are salient deductions from the findings and represent what a reasonably prudent person would normally be expected to observe. The recommendations are what appeared to be a sane approach to a multifaceted problem. Neither the findings, conclusions nor recommendations are to be thought of as critical of ongoing programs, or with the pace which the programs have moved or are moving. Hopefully, the study will serve as a base to help guide new actions and programs that will ultimately result in narrowing the gap of delivering needed services to the disabled in Virginia.

SUMMARY

INTRODUCTORY STATEMENT

Objectives of the Study

The Governor's Study Commission on Vocational Rehabilitation was established in February, 1967 to determine the needs of Virginians for vocational rehabilitation services to 1975, and to develop a comprehensive Statewide plan to meet those needs. To carry out that mandate the Commission utilized surveys, testimony of experts, past caseload experience, and population projections to estimate the number of currently disabled and to estimate the number of disabled by category expected for each year through 1975. In addition, the Commission evaluated the current vocational rehabilitation programs in Virginia to identify barriers which might be blocking or delaying services. By comparing the current programs to future needs the Commission determined the additional resources which will be necessary to meet all vocational rehabilitation needs during the next six years. To encourage and to facilitate the allocation of adequate resources to meet these needs, the Commission developed a written plan in the form of recommendations. This comprehensive Statewide plan specifies the coordination and funding necessary to produce enough professional personnel, facilities, and services to fulfill the State's vocational rehabilitation goals.

Key Problems

The recommendations emphasize solving five key problems of Virginia's vocational rehabilitation programs.

1. The first problem is one of inadequate funds for a vocational rehabilitation program of total services. This is an obvious problem, and one not unique to this policy area. Its solution turns not on recommendations of this Commission, but on the public's decisions about the amounts of services it wants and is able and willing to provide.
2. The second problem is one of coordinating the many services available to vocational rehabilitation clients. The Commission's recommendations are designed to encourage and make effective intra-agency and inter-agency coordination and cooperation. To be efficient and effective the vocational rehabilitation agencies must serve as organizers of a variety of services from numerous sources.
3. The third problem is the public's pervasive lack of understanding of the vocational rehabilitation programs. Unfortunately, this problem is not confined to the general public. It exists among personnel involved in developing job placement and client referral sources as well. This inhibits casefinding and client placement.
4. The fourth problem is the practice of serving the more feasible cases rather than the more severely disabled cases. Shortages of finances, manpower, and rehabilitation facilities dictated this policy in the past. As the vocational rehabilitation agencies receive substantial increases of these resources the more severely disabled must benefit correspondingly.
5. The fifth problem is one of inadequate vocational rehabilitation manpower and facilities. Even if ample financing were available immediately for the vocational rehabilitation programs a total program would be impossible. Many of the recommendations in this report seek to create long range solutions to shortages in manpower and facilities.

To Meet Total Needs

During the course of the study much evidence and sentiment have emphasized the need for increasing services to the more severely disabled. In the public hearings and in the community surveys the general public continuously expressed a desire for the vocational rehabilitation program to expand services to the severely disabled. Professional vocational rehabilitation personnel, professional personnel in related programs, and members of the Governor's Study Commission on Vocational Rehabilitation articulated support of this program goal. The latter group has expressed a desire for funds to be provided preferentially for aiding the catastrophically disabled if limited allocations do not allow a program which will meet total needs.

Of course increased emphasis on helping the severely disabled will raise the risk of rehabilitation failures in individual cases. Also, it will increase the demand and need for comprehensive rehabilitation facilities and for non-competitive work situations for many of the most severe cases.

Reaching this program goal successfully will require a decided increase in funding for the vocational rehabilitation programs over the next six years. At first glance the total resources required may appear excessive. However, in this Commission's judgment the total costs are neither excessive nor impractical. A number of studies have shown that public money invested in rehabilitating persons vocationally reaps real and direct profits to the general public in augmented taxes, increased productivity, and removal of these rehabilitants from public welfare rolls. Of course, these direct material returns to the general public will not increase proportionately as the most severely disabled are accepted in large numbers into the client caseloads of the vocational rehabilitation agencies. But, private support is not adequate for these potential clients who are in the greatest need of vocational rehabilitation services.

The Commission feels the time is ripe for the State to recognize the many non-material benefits which will derive from providing services for all in need of them. It views providing an opportunity for a meaningful vocational life for all its citizens as a social obligation on the conscience of all Virginians. In the long run the material and non-material rewards to a society adopting this approach to vocational rehabilitation are too great to resist.

FORMAT OF THE RECOMMENDATIONS

This report is a summary of the recommendations of the Governor's Study Commission on Vocational Rehabilitation in Virginia. The recommendations are presented in a standard format which includes the primary agencies or persons responsible for implementing the recommendation, suggested methods of implementation, and estimated costs on a federal and state basis.

Responsibility

Several public and/or private agencies would inevitably be involved in implementing each recommendation. In general, however, only those agencies with primary responsibility are listed.

Priority Categories

The recommendations are listed in order of relative importance within five priority categories: (1) action; (2) immediate; (3) soon; (4) interim; and (5) long-range (Table 0.1). The action category represents recommendations included in the Governor's Study Commission Interim Report of December, 1967, which have been acted upon or are currently being acted upon.

The *immediate* category includes recommendations which require little additional funding or manpower and which can be implemented during the first half of fiscal year 1969. Those recommendations which require little additional funding or manpower but which require a longer implementation period are designated by the *soon* category.

The remaining recommendations require considerable additional funds, manpower, or legislative action and cannot be dealt with before the 1970 session of the Virginia General Assembly. These recommendations are designated as interim for fiscal year 1971 and 1972 and *long-range* for fiscal years 1973, 1974, and 1975. This arrangement provides a practical plan for phasing funds, manpower, and facilities to meet the total need for vocational rehabilitation services by 1975.

Within each of the priority categories, the recommendations have been listed according to their relative importance. It should be noted that the arrangement of recommendations represents objective criteria combined with subjective evaluations. The recommendations must be considered as a *total plan* because all the recommendations are essential to the composite plan for rehabilitation services. Where the *action* category recommendations have not been implemented through prior or current action, they are included in other appropriate priority categories for reconsideration.

Ways to Implement

Ways to implement are included for each recommendation. These include both suggested approaches or alternatives which might be used in implementation and funding or manpower requirements necessary for implementing each recommendation.

Estimating Costs

Where possible, estimated costs are apportioned between federal and state funds. Costs are included for the entire period from implementation through fiscal year 1975. In some cases, the cost of a given recommendation is covered by a related recommendation, and this is indicated. There are instances in which costs cannot be estimated because of the nature of the recommendation.

Funding and Manpower Requirements

Two tables included at the end of the recommendations summarize the total costs and manpower needs for all recommendations. These have been arranged according to the priority categories noted above.

TABLE 0.1—Dimensions Considered In Establishing The Categories Of Priorities

		Dimensions Considered		
Priority Category	*Time*	*Type of Required Change*	*Finances Involved*	*Manpower Involved*
ACTION	In progress or completed	All types	All types	All types
IMMEDIATE (to correct current operating problems)	Within next 6 months (first half of FY 1969)	Administrative, within agencies organizational or procedural	Little or none (generally a change in use only)	Reassignment of duties only; no additional manpower
SOON (to set stage for program expansion)	Within one year (FY 1969)	1. Administrative, within agencies: organizational or procedural 2. Administrative, outside of VR agencies 3. Governor's office	1. Only that possible within current operating budget of VR 2. Other state agencies 3. Other local agencies	1. Reassignment of duties mainly 2. Additional personnel only as permissible under operating budget
INTERIM (to expand in preparation for meeting all VR needs)	One to four years (FY 1969-1972)	1. Administrative, within agencies 2. Administrative, outside of VR agencies 3. Governor's office 4. State legislation 5. Federal legislation 6. RSA changes	1. More than possible within current operating budget 2. State increase 3. Larger portion of available federal money	1. Reassignment of duties 2. Additional personnel
LONG RANGE (to meet all VR needs)	Four to seven years (FY 1972-1975)	1. Administrative, within agencies 2. Administrative, outside of VR agencies 3. Governor's office 4. State legislation 5. Federal legislation 6. RSA changes	1. Large amounts of additional funds 2. State 3. Federal 4. Local 5. Private	1. Reassignment of duties 2. Additional personnel 3. Establishment of sources for training large numbers of VR professional personnel

SUMMARY OF RECOMMENDATIONS

ACTION RECOMMENDATIONS

Action 1: Increase the number of disabled Virginians served at Woodrow Wilson Rehabilitation Center.

Responsibility: DVR and General Assembly

Implementation: Increased State appropriations. (Completed, negative)

Costs: FY 69—Federal share	$300,000	FY 70—Federal share	$333,750
State share	100,000	State share	111,250

Action 2: Request the Virginia Advisory Legislative Council to study the advisability of establishing a "Second-Injury Fund" under the Workmen's Compensation Law.

Responsibility: VALC, DVR, and CVH

Implementation: The VALC should, in consultation with DVR and CVH, develop recommended legislation for a broad coverage second-injury fund law and submit a plan to the 1968 session of the Virginia General Assembly. (Still under study)

Costs: None

Action 3: Legislation, within the framework of the Virginia Workmen's Compensation Act, to create a Second-Injury Fund to be financed by appropriate increases in contributions should be passed and VR should be included for medical expenses in appropriate cases.

Responsibility: DVR, General Assembly, and Industrial Commission

Implementation: (1) Second-injury legislation modeled on the Council of State Government's "Proposed Legislation for Subsequent or Second-Injury Funds" should be adapted and (2) the General Assembly should amend the State's workmen's compensation laws to include vocational rehabilitation services within the purview of medical expenses. (No action; pending completion of study)

Costs: None

Action 4: Extend the period of time during which an injured worker may receive medical services for injuries which are accident-connected.

Responsibility: General Assembly and State Industrial Commission

Implementation: General Assembly should authorize the Industrial Commission to extend the period of time during which medical services can be provided. (Completed, negative)

Costs: None

Action 5: Request the General Assembly to make an annual appropriation of $175,000 to the Department of Vocational Rehabilitation to be used in the staffing and operation of private, nonprofit sheltered workshops.

Responsibility: General Assembly and DVR

Implementation: Increase the annual DVR appropriation. (Completed, negative)

Costs: FY 68—State share .... $175,000 FY 69—State share $175,000

Action 6: Remove the $1,000 restriction on expenditures for an initial prosthetic device in order to permit the industrial commission to authorize the expenditure of funds as necessary to provide training in the use of prosthetic devices.

Responsibility: General Assembly and Industrial Commission

Implementation: Legislative change. (Completed, negative)

Costs: None

Action 7: Seek State appropriation in order to complete the services required for the disabled individuals discharged from special service programs in mental hospitals, schools for the retarded, institutions for youthful public offenders, and public schools.

Responsibility: General Assembly and DVR

Implementation: (1) Increase DVR appropriation, (2) employ additional VR personnel, and (3) purchase case services for 1,500 additional clients in FY 69 and for 2,000 additional clients in FY 70. (Completed, negative)

Costs:	FY 69—Federal share	$775,000	FY 70—Federal share	$975,000
	State share	225,000	State share	325,000

Action 8: Seek legislation to: (1) require plans for new public buildings to include accommodations for the handicapped (including the blind and deaf), (2) require renovation of existing public buildings to include all feasible provisions for the use by and safety of the handicapped, and (3) require minimum standards in all public buildings—even if renovation is required—to allow for use by handicapped.

Responsibility: DVR and Governor

Implementation: (1) Building lobbying support, and (2) legislative action by General Assembly; initiation by Governor. (No action taken)

Costs: None

Action 9: Provide State appropriations to pay the employer's cost of social security, retirement, and insurance for DVR employees (DVR now must assume this, instead of the Virginia Supplemental Retirement System, as was previously done).

Responsibility: General Assembly and DVR

Implementation: Additional funds should be appropriated to DVR. (Completed, positive)

Costs: FY 69—State share .... $195,035 FY 70—State share $214,965

Action 10: Require the State Industrial Commission to reimburse DVR for expenses incurred in the rehabilitation of clients referred from the Industrial Commission.

Responsibility: General Assembly and State Industrial Commission and DVR

Implementation: The General Assembly should provide that DVR be reimbursed for services to clients referred by the Industrial Commission. (Completed, negative)

Costs: None

Action 11: Station one DVR counselor and one secretary at the Industrial Commission office to screen all industrial accident victims for potential rehabilitation services. Salaries of DVR personnel should be reimbursed by the Industrial Commission.

Responsibility: Industrial Commission and DVR

Implementation: Assignment of staff by DVR to State Industrial Commission—one counselor "B" and one clerk-stenographer "B." (Completed, positive)

Costs: FY 68 .... $20,000 FY 69 .... $20,000 FY 70 .... $20,000

Action 12: Have the Division of State Planning and Community Affairs study related State agency programs to determine if it would be in the best interest of the State for DVR to administer all rehabilitation functions.

Responsibility: Governor's Office, Division of State Planning and Community Affairs, and DVR

Implementation: Study of related Agency programs. (Study in progress)

Costs: None

IMMEDIATE RECOMMENDATIONS

Immediate 1: Create and support a school unit at the Virginia State School at Hampton.

Responsibility: CVH and VSSH

Implementation: Obtain funds for and employ one counselor "C," one mobility instructor, one work evaluator, one prevocational instructor, and one clerk-steno "B."

Costs: FY 69	$50,000	FY 72	$60,000	FY 74	$70,000
FY 70	$50,000	FY 73	$70,000	FY 75	$70,000
FY 71	$60,000				

Immediate 2: Create and support a school unit at the Virginia School for the Deaf and Blind in Staunton.

Responsibility: CVH and VSDB

Implementation: Obtain funds for and employ one mobility instructor, one counselor "A," one work evaluator, one instructor, and one clerk-steno "B."

Costs: FY 69	$60,000	FY 72	$70,000	FY 74	$70,000
FY 70	$60,000	FY 73	$70,000	FY 75	$70,000
FY 71	$60,000				

Immediate 3: Instruct DVR counselors to use, to the maximum extent feasible, the client training and related services of other agencies. These include the Manpower Development and Training Act programs and the various Office of Economic Opportunity programs, particularly the Job Corps, Neighborhood Youth Corps, and work experience programs.

Responsibility: Director of Related Programs (when established within DVR); until established, Assistant Commissioner

Implementation: Field counselors would be provided with required information on programs and services available within local area and how these programs and services could be utilized for rehabilitation clients.

Costs: None (Case service savings of approximately $500 per client are estimated for rehabilitation clients accepted in related programs, since these programs provide training and training materials, maintenance, and transportation.)

Immediate 4: Increase efforts to inform the public about the State's rehabilitation program in order to capitalize upon the latent public support for the program, in order to give the public more knowledge about the services of the program, and in order to educate the public about the problems of specific disability groups.

Responsibility: Information departments in CVH and DVR; agency staffs, particularly counselors; and the Governor's Advisory Committee on Vocational Rehabilitation and its Regional Task Forces (as soon as these are established)

Implementation: (1) The public should be made fully aware of where persons who need VR assistance can go for help. This could be implemented through the concentrated use of mass media for "spot" announcements. (2) The public should be educated about the specific problems of the mentally handicapped (mentally ill and mentally retarded) in order to erase lingering public doubts about mental handicaps. Utilize direct informational programs such as mass media and program literature and establish joint informational services with public and private related programs throughout the State. (3) Public support of the VR program should be brought to the attention of various political and economic elites throughout the State, utilizing public hearings, informational programs, media announcements and news releases, direct contacts by agency personnel, and Advisory Committee and Task Force members. (4) The public education program should, through films, literature, and lectures, be brought to the public schools. In addition, the ETV program could provide an effective means to reach large numbers of schools and students. (5) As part of the public information program, a film should be made about vocational rehabilitation in Virginia.

Costs: Nos. 1-4, None

No. 5, Federal share $6,400
State share 1,600

Immediate 5: Increase DVR's client service capacity to provide for the rehabilitation of 7,800 clients in FY 69 and 9,200 clients in FY 70.

Responsibility: General Assembly and DVR

Implementation: Additional funds to provide in FY 69 twenty additional field counselors, supervisory and clerical staff, and additional case service funds; and in FY 70 twenty additional field counselors and supporting staff, plus additional case service funds.

Costs: FY 69—Federal share $918,345
State share 306,415

FY 70—Federal share $1,728,705
State share 576,235

Immediate 6: Develop a public information program to advise potential clients and physicians of the State's vocational rehabilitation program.

Responsibility: DVR (Information Director)

Implementation: (1) Use of mass media for spot announcements, distribution of literature to public; (2) develop an increased visitation program to physicians; and (3) develop exhibits and speaker's programs for the various professional meetings of medical personnel.

Costs: None

Immediate 7: Develop a clinic situation where counselor, client, and physician can cooperate more closely and shorten the period of time between the physician's initial contact with a VR client and his serving the client.

Responsibility: DVR counselors and physicians

Implementation: DVR should develop, with its medical consultants, a plan for clinic situations or alternative solutions to allow clients to receive services more promptly.

Costs: None

Immediate 8: Educate employers throughout the State about the positive benefits of employing the handicapped.

Responsibility: DVR and CVH staff (particularly information department and counselors)

Implementation: (1) Through media, literature, news releases, etc., employers should be made aware that public attitudes toward working with all kinds of handicapped persons are highly positive. (2) Meetings should be arranged between employers who have hired the handicapped and employers who have not in order to inform the latter about the performance of handicapped workers in employment.

Costs: None

Immediate 9: **Increase the special assignment of DVR counselors to social security disability beneficiary cases, extend it to areas of the State not presently covered and continue the expansion of the SSDI program.**

Responsibility: DVR

Implementation: (1) The Department of Vocational Rehabilitation would establish two counselor "B" positions after approval by the State Personnel Division and (2) extend coverage to the South Boston and Abingdon administrative areas.

Costs: None (All costs, including guidance and placement, for SSDI cases are reimbursed at 100 percent by the Social Security Trust Fund.)

Immediate 10: **Instruct rehabilitation counselors to maintain effective liaison with medium-sized businesses (those with 4-49 and 50-249 employees) and to establish more effective liaison with larger businesses (those having 250 or more employees).**

Responsibility: DVR and CVH

Implementation: Direct contacts between rehabilitation counselors and employers.

Costs: None

Immediate 11: **Instruct rehabilitation counselors to make greater efforts in minimizing union resistance toward the placement of handicapped workers.**

Responsibility: DVR and CVH

Implementation: Direct contacts with local union officials and members.

Costs: None

Immediate 12: **As part of their in-service training, inform rehabilitation counselors about the placement opportunities for handicapped persons with government agencies (State and Local) and with service industries. Further encourage rehabilitation counselors to place more clients with government agencies and service industries.**

Responsibility: Training Directors within DVR and CVH

Implementation: The information program should be included in the in-service training program. Rehabilitation counselors should be made responsible for increasing placement opportunities in these areas through direct contact with employers.

Costs: None

Immediate 13: **Minimize employers' resistance toward the handicapped through mobilization of public support and specific educational and informational programs. Encourage positive attitudes and support among management. Further, give particular attention to personnel directors, clerks, supervisors, and foremen in an effort to decrease resistance in operational hiring practices. (Programs designed to reach the supervisors and foremen should utilize the cooperation of unions.)**

Responsibility: Commissioner of DVR and Director of CVH; DVR and CVH staff (particularly counselors)

Implementation: Agency personnel, particularly counselors, should be responsible for meeting with employers and union groups for the purpose of informing them about the rehabilitation program and of explaining the placement process and the difficulties involved in the process. Further, employers and local unions should be supplied with news releases, brochures and other materials relevant to the rehabilitation program.

Costs: None

Immediate 14: **Instruct rehabilitation counselors to make special efforts to increase placement opportunities for disabled persons thirty-six years of age or older.**

Responsibility: Assistant Commissioner of DVR and Assistant Director of CVH

Implementation: Direct contacts between field counselors and employers.

Costs: None

Immediate 15: **Encourage all businesses to eliminate architectural barriers in order to facilitate the employment of the handicapped.**

Responsibility: DVR and CVH staff (particularly information departments)

Implementation: All employers should be provided with guidelines: (1) as to how existing buildings can be adapted to eliminate architectural barriers, (2) as to how new buildings can be designed to eliminate architectural barriers.

Costs: None

Immediate 16: **Inform employers about the effectiveness of proper "matching" (placement of handicapped in jobs for which they are trained and able to perform).**

Responsibility: Information directors and rehabilitation counselors within the two agencies.

Implementation: The information directors would provide an educational and informational program through news releases, brochures, and "spot" announcements on radio and television. The counselors would, through direct contacts with employers and employer associations, provide specific information about the matching process and its applicability to given types of businesses.

Costs: None

Immediate 17: **Maximize cooperation in the use of placement contacts, methods, and operations between DVR and VEC.**

Responsibility: (1) DVR Director of Related Programs (when established), Director of Field Services until established, and (2) VEC Assistant Commissioner

Implementation: (1) Training officers in both agencies should develop more effective in-service programs; and (2) DVR should utilize VEC's evaluation of placement potential for the disabled through use of physical demand forms and use the cooperative agreement between DVR and VEC more effectively.

Costs: None

Immediate 18: **Seek ways (statutory, administrative, informational) to improve the reporting of legally blind persons to CVH.**

Responsibility: CVH

Implementation: (1) Expand information services, emphasizing the necessity of knowing about services for all the severely visually disabled and (2) seek greater cooperation of the Virginia Medical Society, Virginia Opthamologists Association, Medical College of Virginia, University of Virginia School of Medicine, Division of Motor Vehicles, etc., in the reporting of legally blind persons.

Costs: None

Immediate 19: **Create a work evaluation unit in the Charlottesville Workshop for the Blind.**

Responsibility: CVH

Implementation: Obtain funds for and employ one unit supervisor, three work evaluators, and one clerk-steno "B."

Costs: FY 69—$35,700 (already appropriated)

Immediate 20: **Establish joint in-service training programs for DVR and related agencies' personnel—including welfare personnel, public health nurses, employment counselors, and others.**

Responsibility: (1) DVR Director of Training and Director of Related Programs and (2) Training Directors in appropriate agencies

Implementation: Development of joint in-service training program.

Costs: None

Immediate 21: Implement agency reorganization for CVH.

Responsibility: CVH

Implementation: (1) $38,000 in funds for FY 69 (no *new* funds); (2) restructure similarly to Social & Rehabilitation Service, U.S. H.E.W.; and (3) employ additional professional personnel consisting of an administrator and district supervisors.

Costs: None

Immediate 22: Develop a more efficient referral system for persons having hearing disabilities.

Responsibility: DVR

Implementation: Institute a system which will result in better referral communications with:
a. Medical Society of Virginia
b. Virginia Speech and Hearing Association
c. University of Virginia Speech and Hearing Centers
d. Virginia Department of Health
e. Virginia Employment Commission
f. Virginia Department of Welfare and Institutions
g. Virginia Society for Crippled Children
h. Virginia Osteopathic Society

Costs: None

Immediate 23: Create the post of "Director of Community Rehabilitation Facilities."

Responsibility: DVR

Implementation: Administrative procedure by DVR and State Personnel Division. Responsibilities of the position would include: (1) organizing and developing satellite workshops, as needed, (2) helping coordinate public and private workshops, and (3) directing DVR's seven area coordinators of community rehabilitation facilities.

Costs: FY 69—Federal share	$16,114	FY 73—Federal share	$20,802
State share	4,278	State share	5,200
FY 70—Federal share	$17,970	FY 74—Federal share	$21,740
State share	4,492	State share	5,525
FY 71—Federal share	$18,868	FY 75—Federal share	$22,860
State share	4,717	State share	5,870
FY 72—Federal share	$19,811		
State share	4,953		

Immediate 24: **Upgrade the current DVR position of Training Supervisor to Director of Training and develop a more comprehensive training program.**

Responsibility: DVR

Implementation: Through administrative procedure. Responsibilities of position would include developing additional in-service training programs, helping in recruiting, helping study the need to develop additional undergraduate and graduate programs for professional VR personnel, initiating a training program for subprofessional VR personnel, and cooperating in developing a training program for public and private workshops' personnel.

Costs:

FY 69	Federal share	$16,114
	State share	4,278
FY 70	Federal share	$17,970
	State share	4,492
FY 71	Federal share	$18,868
	State share	4,717
FY 72	Federal share	$19,811
	State share	4,953
FY 73	Federal share	$20,802
	State share	5,200
FY 74	Federal share	$21,740
	State share	5,525
FY 75	Federal share	$22,860
	State share	5,870

Immediate 25: **Develop a master plan for the training of DVR personnel.**

Responsibility: DVR (Director of Training)

Implementation: A master plan should be developed which will take into account personnel needs on a short-term and long-range basis and will provide for training facilities and coordinated training programs adequate to meet these needs.

Costs: None

Immediate 26: **Explore the possibility of establishing training courses on a supervisory level for workshop personnel in community colleges or at the Virginia Commonwealth University.**

Responsibility: DVR (Director of Training and Director of Community Rehabilitation Facilities)

Implementation: Development of a master plan of training needs and of a program to meet current and future demands.

Costs: None

Immediate 27: **Set up record keeping systems at the counselor level of DVR to provide information on referrals to related programs, the services provided to referrals by related programs, and the outcome of training provided to referrals by related programs.**

Responsibility: DVR

Implementation: A form should be developed for referrals to related programs providing information now included on VR-1 form and also on: (1) agency and program to which client is referred, and (2) outcome of referral, including services provided, length of training, closure status. This form would be filled in by counselor making the referral.

Costs: None

Immediate 28: **Simplify eligibility requirements and approval procedure by the counselor for carrying out of treatment for clients.**

Responsibility: DVR and physicians

Implementation: DVR and medical consultants should develop a plan for expediting client services.

Costs: None

SOON RECOMMENDATIONS

Soon 1: **Create a Governor's Advisory Committee on Vocational Rehabilitation with regional Task Forces and with budgeted staff.**

Responsibility: Governor

Implementation: Executive Order. Establish 1969; renew annually through 1975. Annual budget = $50,000 Total budget = $300,000.

1. Staff—Director and clerk-steno "B"
   Unit cost (salaries, fringe benefits, travel, office) = $30,100 annually
2. Travel and other expenses for Advisory Committee and Task Force appointed members. Four meetings of Advisory Committee and each Task Force per year Estimated expenses of $70 per person per meeting. Total = $19,900 per year.

Costs: State share $300,000

Soon 2: Continue the rebuilding program at Woodrow Wilson Rehabilitation Center. Appropriate the necessary funds for planning of a new medical building.

Responsibility: DVR and General Assembly

Implementation: Plans should be made for the proposed medical building.

Costs: State share $95,000

Soon 3: Consider the feasibility of creating special service units in the State's penal institutions.

Responsibility: DVR and Department of Welfare and Institutions

Implementation: Coordinate efforts of the two agencies.

Costs: None

Soon 4: Assign special counselors to local welfare departments in heavily populated areas, such as Richmond, Norfolk, and Alexandria.

Responsibility: DVR

Implementation: DVR would add three counselor "B" positions after approval by the State Personnel Division.

Costs: FY 70—Federal share	$34,560	FY 73—Federal share	$34,560
State share	8,640	State share	8,640
FY 71—Federal share	$34,560	FY 74—Federal share	$34,560
State share	8,640	State share	8,640
FY 72—Federal share	$34,560	FY 75—Federal share	$34,560
State share	8,640	State share	8,640

(Estimated costs shown are unit costs, includes three counselor "B," ½ clerk-steno "B" per counselor (salaries and fringe benefits for all included) and travel expenses and office allowances for each counselor.)

Soon 5: Encourage cooperation between local school boards and the State Department of Education to develop special prevocational training for children with disabilities.

Responsibility: DVR and Governor's Advisory Committee on VR

Implementation: (1) Encourage local school boards to take advantage of the permissive legislation passed by the 1968 General Assembly which allows them to use local funds for initiating such training; (2) plan to expand programs in FY 70 when such programs become 60 percent reimbursable (under 1968 legislation); and (3) utilize the Regional Task Forces of the Governor's Advisory Committee on VR to inform the public about the program and the need for it.

Costs: Not available.

Soon 6: Coordinate efforts to consider developing rehabilitation facilities for the aged with the Governor's Commission on Mental and Geriatric Patients created by the 1968 General Assembly.

Responsibility: DVR and Governor's Advisory Committee on VR

Implementation: (1) Investigate the possibility and feasibility of establishing workshop situations for the aged, (2) consider retraining the competitively employable aged (beyond retirement age), and (3) coordinate with Governor's Commission on Mental and Geriatric Patients.

Costs: None

Soon 7: Conduct a study in cooperation with the Governor's Advisory Committee on Vocational Rehabilitation (and regional task forces) on the feasibility of providing State subsidies or other financial incentives to workshops serving the severely disabled and the aged severely disabled in order for these workshops to meet minimum wage requirements.

Responsibility: DVR (Director of Rehabilitation Facilities) and Governor's Advisory Committee on Vocational Rehabilitation

Implementation: Feasibility study of State subsidy or alternative financial support to terminal workshops.

Costs: None

Soon 8: Rehabilitation agencies should contract with individual employers to provide work experience and on-the-job training for groups of handicapped persons.

Responsibility: DVR (Director of Related Programs) and CVH

Implementation: (1) Contracts between the rehabilitation agencies and individual employers and (2) work with AFL-CIO on developing specific, full-time, on-the-job training programs.

Costs: (Part of case service costs)

Soon 9: Expand program of work evaluation unit in the Charlottesville Workshop for the Blind.

Responsibility: CVH

Implementation: Obtain funds for and employ one psychologist, one mobility instructor, and one clerk-steno "B."

Costs:	Federal share	$96,000
	State share	24,000

Soon 10: Continue efforts to initiate and expand DVR's special service units in cooperation with other agencies of State and local government.

Responsibility: DVR and cooperating agencies

Implementation: Cooperative agreements

Costs: (Cost depends upon type of units established. Federal, State, and third party funds can be used.)

Soon 11: Create post of "Director of Related Programs."

Responsibility: DVR

Implementation: Establish the position through State Personnel Division. Responsibilities of the position are to include coordinating related programs for DVR, informing DVR personnel about services available for DVR clients, informing personnel of related agencies about DVR's programs, and providing inter-agency liaison generally.

Costs: FY 69—	Federal share	$16,114	FY 73—	Federal share	$20,802
	State share	4,278		State share	5,200
FY 70—	Federal share	$17,970	FY 74—	Federal share	$21,740
	State share	4,492		State share	5,525
FY 71—	Federal share	$18,868	FY 75—	Federal share	$22,860
	State share	4,717		State share	5,870
FY 72—	Federal share	$19,811			
	State share	4,953			

Soon 12: Utilize the position of "Director of Cooperative School Programs."

Responsibility: DVR

Implementation: Through administrative procedure. Responsibilities of the position will include the administration of ongoing school unit programs and the expansion of the program to additional communities.

Costs: None

Soon 13: Establish the position of "Director of DVR and Department of Public Welfare Coordinated Services" within the Department of Vocational Rehabilitation.

Responsibility: DVR

Implementation: The Department of Vocational Rehabilitation would establish this position after approval by the State Personnel Division.

Costs: FY 70—Federal share	$17,970	FY 73—Federal share	$20,802
State share	4,492	State share	5,200
FY 71—Federal share	$18,868	FY 74—Federal share	$21,740
State share	4,717	State share	5,525
FY 72—Federal share	$19,811	FY 75—Federal share	$22,860
State share	4,953	State share	5,870

(Costs shown include director and clerk-steno "C" salaries and fringe benefits, travel expenses, and office expenses.)

Soon 14: Expand CVH's two local "Personal Adjustment Training Programs."

Responsibility: CVH

Implementation: A procedural change in CVH will be necessary. Current manpower will be utilized, and no additional finances are required. Two to four weeks of concentrated training in mobility, carried out in public building to help in general adjustment to blindness, is needed. Pilot program will serve as feeder for Rehabilitation Adjustment Center. The program should later be expanded to Southwest Virginia and Norfolk areas.

Costs: None

Soon 15: Develop college training programs, at both the undergraduate and graduate level, designed to produce vocational rehabilitation personnel needed in the future.

Responsibility: DVR (Director of Recruitment and Director of Training) and CVH

Implementation: Coordinate VR planning efforts with the current VALC study of ways to meet Virginia's needs in these areas (VALC Study Commission on Social Work, Manpower, and Education).

Costs: None

Soon 16: Apply for a grant to finance study of DVR intra-agency position analysis and specification: objectives of this study being:

a. To specify level and type of training for each position.

b. To develop additional "steps" in promotion process (to take into account: training, experience, and agency needs).

Responsibility: DVR

Implementation: The study would be devoted to an analysis of each position leading to the development of training programs designed to prepare people for specific levels of operation within the agency.

Costs: None

Soon 17: DVR should provide all workshops with specific guidelines on the wage and hour laws relating to workshop employment.

Responsibility: Director of Community Rehabilitation Facilities and Area Coordinators, when these positions are established.

Implementation: Overall study of wage and hour laws relating to workshops; development and distribution of guidelines to workshops.

Costs: None

INTERIM RECOMMENDATIONS

Interim 1: Establish a regional comprehensive rehabilitation center in the Abingdon DVR Administrative Area.

Responsibility: DVR

Implementation: Construct and equip a regional rehabilitation center with 600 daily caseload capacity able to serve 1800 clients annually.

Costs: Federal share	$6,824,050
State share	5,196,950

Implementation: Operate comprehensive center.

Costs: (Annual) Federal share	$2,400,000
State share	600,000

(See page 18)

Interim 2: Develop Tidewater Rehabilitation Institute into a comprehensive rehabilitation center, to include vocational training and residential facilities.

Responsibility: DVR and Norfolk Area Medical Center Authority.

Implementation: Additional construction, additional equipment, site work, fees, etc.

Costs: Federal share	$4,519,050
State share	3,401,950

(See page 19)

Interim 3: Develop National Orthopaedic and Rehabilitation Hospital into a comprehensive rehabilitation center, to include vocational training and residential facilities.

Responsibility: DVR and National Orthopaedic and Rehabilitation Hospital

Implementation: Additional construction, additional equipment, site work, fees, and related costs.

Costs: Federal share	$3,554,050
State share	2,691,950

(See page 19)

Estimated Costs of Comprehensive Center(a)

Construction(b)	$ 9,671,000
Equipment and furnishings	850,000
Fees and contingencies	1,200,000
Additional site work(c)	300,000
	$12,021,000(d)

(a) The daily caseload capacity of the comprehensive center for which costs are estimated would be 600. Services could be provided to approximately 1,800 persons per year with this capacity.

(b) This includes the following buildings: (1) Medical Building—approximately 100 bed capacity; (2) Vocational Training Building; (3) Activities Building; (4) Women's Dormitory—approximately 200 person capacity; (5) Men's Dormitory—approximately 300 person capacity; and (6) Administration Building.

(c) This is for site work only; it does not include land purchases.

(d) Based on the current rates, this total will increase from 5-7 percent per year.

Estimated Costs of Proposed Plan

Construction of one complete comprehensive center: $12,021,000

Federal share	$ 6,824,050(a)
State share	5,196,950(a)
	$12,021,000

(a) Based on Federal-State ratios of 55:45 for construction, fees, site work and 80:20 for equipment.

Estimated Operating Costs

Total annual operating expenses is $3,000,000 per center.

Case service costs cover most of the operating expenses of the comprehensive centers. It is expected that case service costs will average approximately $1,600 per client for each of the 1800 clients served by each center. This will provide approximately $2.88 million in case service costs for each of the comprehensive centers annually.

Federal share	$2,400,000
State share	600,000
	$3,000,000

Approximately 80 percent of annual operating costs are for staff salaries and wages. The following is a list of staff needed to operate a comprehensive center. Approximately 250 persons would be needed for each center with the distributions between administration and administrative services and student services.

Estimated Staffing Needs per Center

I. Administration
  1 Director
  1 Assistant Director
  2 Secretary
Administrative Services
  1 Record Librarian
  1 Mail Clerk
  1 Duplicating Machine Operator
  4 Switchboard Operator
  1 Storekeeper
Business Office
  1 Business Manager
  2 Accountant
  1 Purchase and Stores Supervisor
  1 Cashier
  1 Secretary
  3 Clerk

Buildings and Grounds
  1 Superintendent
  2 Supervisor
  2 Assistant Supervisor
  9 Janitor
  14 Maid
  2 Driver
  4 Groundsman
  2 Painter
  2 Carpenter
  2 Electrician
  2 Plumber—Steamfitter
  5 Fireman

II. Student Services
1 Program Supervisor
1 Secretary

Counseling
1 Unit Supervisor
6 Counselor
4 Secretary
1 Housing Supervisor
4 Dormitory Counselor
6 Campus Patrolman

Student Activities
1 Unit Supervisor
3 Recreation Supervisor
1 Secretary
9 Recreation Aide
5 Clerk

Infirmary
6 Registered Nurse
5 Licensed Practical Nurse
18 Hospital Attendant

Occupational Therapy
1 Director
1 Supervisor
2 Occupational Therapist
1 O. T. Aide

Physical Therapy
1 Director
1 Supervisor
3 Physical Therapist
2 P. T. Aide

Evaluation
1 Program Supervisor
1 Unit Supervisor
2 Psychologist
3 Counselor
6 Vocational Evaluator
4 Secretary

Medical Services
1 Program Supervisor
1 Medical Director
1 Director of Physical Restoration
4 Staff Physician
1 X-ray Technician
3 Secretary

Speech Therapy
1 Director
1 Speech Therapist
1 Secretary

Vocational Training
1 Program Supervisor
2 Unit Supervisor
2 Secretary
40 Vocational Instructor

Development of Tidewater Rehabilitation Institute and the National Orthopaedic and Rehabilitation Hospital into Comprehensive Rehabilitation Centers.

Additional construction	$11,842,000
Additional equipment	1,125,000
	$12,967,000
Site work, fees, etc.	1,200,000
	$14,167,000
Federal share	$ 8,043,100(a)
State share	6,123,900(a)
	$14,167,000

(a) Based on Federal-State ratios of 55:45 for construction, fees, site work and 80:20 for equipment.

Estimated Operating Costs

Total annual operating expenses $3,000,000 per center.

Case service costs cover most of the operating expenses of the comprehensive centers. It is expected that case service costs will average approximately $1,600 per client for each of the 1,800 clients served by each center. This will provide approximately $2.88 million in case service costs for each of the comprehensive centers annually.

Federal share	$4,800,000
State share	1,200,000
	$6,000,000

Approximately 80 percent of annual operating costs are for staff salaries and wages. Attached is a list of staff needed to operate a comprehensive center. Approximately 250 persons would be needed for each center with the distributions between administration and administrative services and student services as shown.

Interim 4: Construct and equip a rehabilitation adjustment training center for the blind (operated by CVH) by 1972.

Responsibility: CVH and General Assembly

Implementation: Construct a rehabilitation adjustment center with daily caseload capacity of 20-40 clients able to serve approximately 120 persons per year.

Costs: Construction	$1,035,000
Equipment	100,000
	$1,135,000
Federal share	$ 649,250
State share	485,750

Operating costs: FY 72—$150,000. These costs are covered under expanded case service funds for the agency and include salaries for 11 professional, 3 clerical, and 7 service personnel.

Interim 5: Increase the funding of DVR and CVH in order that the severely disabled can be served.

Responsibility: General Assembly

Implementation: Increased appropriations to cover rehabilitation costs for severely disabled.

Costs: The costs of serving the severely disabled are included as part of the operating expenses for the planned comprehensive rehabilitation centers. It is estimated that the average cost per client in each center will be approximately $1,600. If each center serves 1800 clients per year, this will result in case service costs of approximately 2.88 million dollars per center per year. The case service costs will cover approximately 95 percent of the total operating costs of each center. Thus, the costs for serving the severely disabled are a part of the comprehensive center plan developed for serving the needs of all disabled persons in the State.

Interim 6: Establish the position category of "Counselor Aide."

Responsibility: DVR (Director of Recruitment and Director of Training)

Implementation: Establish the positions of counselor aide "A" and counselor aide "B" through the State Personnel Division. Duties are to include the performance of stenographic tasks and working with clients in the early referral stages. This should serve to reduce the amount of paper work for counselors. High school training is necessary and some college desirable. Stenographic or equal training is needed. In-service training in dealing with referrals would be offered by DVR. Salary range of $4,320-$5,400 for counselor aide "A" and $4,920-$6,144 for counselor aide "B" should be considered.

Costs: None

Interim 7: Employ and train counselor aides to reduce the amount of paper work for the counselor. Counselor aides could assume some of the preliminary counseling work which is not of a professional nature, but beyond that associated with the present duties of clerk-stenographers.

Responsibility: DVR (Director of Training and Director of Recruitment) and CVH

Implementation: Employ and/or train in FY 71 ten counselor aides "A"—assign six aides to DVR and four to CVH. Employ and/or train in FY 72 ten counselor aides "A"—assign eight to DVR and two to CVH.

Costs:	FY 71—Federal share	$34,560	FY 72—Federal share	$37,632
	State share	8,640	State share	9,408

Interim 8: Expand vocational rehabilitation personnel of CVH.

Responsibility: CVH and General Assembly.

Implementation: Secure funds for and employ additional staff consisting of eight professional and three clerical.

Costs: FY 71 .... $230,000 FY 72 .... $230,000

Interim 9: DVR should encourage and assist workshops and facilities to plan, develop, and initiate residential units for clients who are in need of such service.

Responsibility: DVR (Director of Community Rehabilitation Facilities and the Area Coordinators of Rehabilitation Facilities)

Implementation: The DVR Rehabilitation Facilities personnel would survey need, provide technical assistance in the planning of residential units, and would advise the workshop or facility of the grant procedures to be followed for federal assistance in the establishment of these units.

Costs: The federal ratio of 90:10 under expansion grants for a three-year period for alterations and equipment. Unit costs of approximately $1,000-$1,200 per person per year can be expected within residential units. This does not include construction or equipment.

Interim 10: Encourage and assist workshops and rehabilitation facilities to set up vocational evaluation units.

Responsibility: DVR (Director of Community Rehabilitation Facilities and Area Coordinators of Rehabilitation Facilities)

Implementation: The Director and Area Coordinators should assess the feasibility of establishing vocational evaluation units in given workshops or facilities.

Costs: The estimated costs for staff within the proposed CVH vocational evaluation units are approximately $35,000 annually. In any given facility, the exact cost will depend on the physical plant available, the size of the unit, and the number of staff needed.

Interim 11: The State should adopt an effective second-injury fund law. This law should conform to the coverage outlined in the Council of State Governments "Suggested Legislation for Broad Type Coverage Second- or Subsequent-Injury Funds."

Responsibility: Legislative action necessary. DVR and CVH have primary responsibility for supporting this legislative action.

Implementation: The Virginia Advisory Legislative Council is currently conducting a study of second-injury fund legislation. DVR and CVH should be consulted on the type of second-injury fund presented to the Legislature.

Costs: None (The fund is financed through employer contributions to the workmen's compensation fund.)

Interim 12: The State should adopt a law which will eliminate architectural barriers in public buildings. This law should meet the standards outlined in the Council of State Governments "Proposed Legislation on Architectural Barriers" which has been developed by the American Standards Association.

Responsibility: Legislative action is, of course, required for an architectural barriers law. DVR and CVH have the primary responsibility for supporting this legislative action.

Implementation: In addition, the Virginia Advisory Legislative Council is currently conducting a study of the problem of architectural barriers and of the possible legislative remedies. DVR and CVH should be consulted by VALC on the scope and type of legislation to be presented to the Legislature.

Costs: None

Interim 13: Provide assistance and guidance to workshops which are moving toward meeting the standards for workshop accreditation as outlined by the National Policy and Performance Council. In addition, advise workshops of these standards and develop additional standards, where necessary.

Responsibility: DVR (Director of Community Rehabilitation Facilities and the Area Coordinators of Rehabilitation Facilities)

Implementation: The Area Coordinators would be responsible for providing direct advice and guidance to local workshops. The Director would be responsible for outlining and developing additional standards.

Costs: None

Interim 14: Continue to maintain at least the regional average salary for all vocational rehabilitation personnel.

Responsibility: DVR, CVH, and Governor's Advisory Committee

Implementation: The Director of Recruitment and the Director of Training should keep abreast of the changing salary structures of members of HEW Region III. Salary ranges for Vocational Rehabilitation positions in Virginia should be revised to keep the agencies in competitive positions (at least as high as) with other agencies in the region.

Costs: None

Interim 15: Expand the work evaluation unit in the Charlottesville Workshop for the Blind.

Responsibility: CVH

Implementation: Obtain funds for FY 71—$120,000 and FY 72—$120,000.

Costs: Federal share	$192,000
State share	48,000

Interim 16: Provide at least one specialized counselor for the deaf in each of the seven DVR Administrative Areas.

Responsibility: DVR

Implementation: Obtain funds for and employ seven counselor "B's" and four clerk-steno "B's".

Costs: FY 71	$ 98,000
FY 72	98,000
FY 73	98,000
FY 74	98,000
FY 75	98,000
	$490,000
Federal share	$392,000
State share	98,000

Interim 17: Increase CVH appropriations in order to rehabilitate more clients.

Responsibility: CVH and General Assembly

Implementation:	FY 70	$ 433,000
	FY 71	566,000
	FY 72	700,000
		$1,699,000

This is based on an increase of approximately 148 rehabilitations in FY 70, 184 rehabilitations in FY 71, and 217 rehabilitations in FY 72. It includes additional personnel costs of approximately $230,000 for three placement specialists, three mobility instructors, and three secretaries.

Costs:	Federal share	$1,359,200
	State share	339,800

Interim 18: Consider State administrative encouragement, ruling, etc., or legislation to give public business to workshops.

Responsibility: DVR, Governor's Advisory Committee, and General Assembly

Implementation: Introduce a broad State Use Law at the 1970 session of the General Assembly.

Costs: None

Interim 19: Expand the vocational rehabilitation part of the Home Teaching—Rehabilitation Cooperative Program of CVH.

Responsibility: CVH

Implementation: Obtain funds for and employ 18 additional professional personnel.

Costs:	FY 71	$148,000
	FY 72	158,000
		$306,000
	Federal share	$244,800
	State share	61,200

Interim 20: Expand the Business Enterprise Program of CVH.

Responsibility: CVH and General Assembly

Implementation: Secure funds for and employ three accountants, seven vending stand supervisors, and four clerk-steno "B's". This should enable the agency to serve an additional 62 clients in FY 71 and 66 clients in FY 72.

Costs:	FY 71	$91,000
	FY 72	95,000
		$186,000
	Federal share	$148,800
	State share	37,200

Interim 21: Encourage local school boards to take advantage of the permissive legislation passed in the 1968 General Assembly which allows localities to develop special education for children (ages 2-20) with hearing impairments (in cooperation with the State Board of Education).

Responsibility: DVR (Director of Cooperative School Programs)

Implementation: In 1968 and 1969 local school boards may use local funds to develop such programs. In FY 70, 60 percent reimbursement will be available to the localities (from the State).

Costs: None

Interim 22: Create seven posts of "Area Coordinator of Rehabilitation Facilities," one for each of the seven DVR Administrative Areas of the State.

Responsibility: DVR

Implementation: Establish the positions within DVR through the State Personnel Division. These positions will assume responsibility for the development of local rehabilitation facilities with respect to feasibility, funding, establishing market for products and services, and area coordination of rehabilitation facilities.

Costs: FY 71—Federal share	$ 98,798	FY 74—Federal share	$124,677
State share	26,446	State share	31,171
FY 72—Federal share	$111,790	FY 75—Federal share	$131,614
State share	27,944	State share	32,900
FY 73—Federal share	$118,076		
State share	29,519		

Interim 23: Establish the position of "District Supervisor" to coordinate services for the blind and visually handicapped.

Responsibility: CVH

Implementation: Obtain funds for and employ three district supervisors and three secretaries.

Costs: FY 71—Federal share	$48,342	FY 74—Federal share	$59,433
State share	12,834	State share	14,859
FY 72—Federal share	$53,910	FY 75—Federal share	$62,406
State share	13,476	State share	15,600
FY 73—Federal share	$56,604		
State share	14,151		

Interim 24: Establish new district (area) office for CVH at the most advantageous location in the three DVR areas not currently represented.

Responsibility: CVH

Implementation: Obtain funds for rent and operation of offices (covered in unit cost for District Supervisors).

Costs: FY 71	$15,000
FY 72	15,000
	$30,000

Interim 25: Develop a training program for sub-professional employees in private and public workshops and rehabilitation facilities.

Responsibility: DVR (Director of Community Rehabilitation Facilities and Director of Training)

Implementation: A master plan should be developed which will estimate personnel needs for current and future facilities and workshops, and training programs and facilities should be planned which will meet these needs.

Costs: None

Interim 26: Offer State tax incentives during the training period for businesses willing to train and to hire handicapped persons in meaningful positions.

Responsibility: DVR and General Assembly

Implementation: Tax credits would be given to businesses who train and hire the handicapped for meaningful positions. The tax credits would be based on wages paid during training and would be fixed according to a sliding scale. A suggested scale would be credits of: 75 percent for first quarter of training period, 50 percent for second quarter of training period, and 25 percent for third quarter of training period.

Costs: None

Interim 27: Where possible, develop additional school units (rehabilitation facilities) in cooperation with local school systems. Where feasible, encourage local school divisions to develop plans for facilities involving two or more school divisions on a regional basis.

Responsibility: DVR and local school divisions

Implementation: Cooperative agreement

Costs: Third party funds provided by school units for staff, equipment, etc. These are then matched by federal money. No State rehabilitation agency expenditures involved.

Interim 28: Create post of "Director of Related Programs."

Responsibility: DVR and State Personnel Division

Implementation: Establish position.

Costs:

FY 71	Federal share	$16,114
	State share	4,278
FY 72	Federal share	$17,970
	State share	4,492
FY 73	Federal share	$18,868
	State share	4,717
FY 74	Federal share	$19,811
	State share	4,953
FY 75	Federal share	$20,802
	State share	5,200

Interim 29: Create in DVR the post of "Director of Recruitment."

Responsibility: DVR

Implementation: DVR would establish the position through the State Personnel Division. Responsibilities of this position would include the initiation of information programs in high schools and colleges, close cooperation with the Director of Training, administration of the scholarship program, and assist in the development of professional and subprofessional curricula for VR personnel in the State's universities and colleges.

Costs:

FY 71	Federal share	$16,114
	State share	4,278
FY 72	Federal share	$17,970
	State share	4,492
FY 73	Federal share	$18,868
	State share	4,717
FY 74	Federal share	$19,811
	State share	4,953
FY 75	Federal share	$20,802
	State share	5,200

Interim 30: Consider upgrading and activating DVR's research position ("Director of Research").

Responsibility: DVR

Implementation: This could be handled as an administrative procedure. Responsibilities of position should involve the initiation of studies in a number of problem areas of the agency's program. It should also be devised to evaluate caseload over a period of years. A salary range of $14,328 to $17,900 should be considered. (Although this is in excess of the limits for this status, it is believed essential because a lesser amount would not attract an adequate research person.)

Costs:

FY 71—Federal share	$19,462	FY 74—Federal share	$21,120
State share	4,865	State share	5,280
FY 72—Federal share	$20,000	FY 75—Federal share	$21,720
State share	5,000	State share	5,430
FY 73—Federal share	$20,540		
State share	5,135		

Interim 31: Involve DVR, VEC, and the Department of Health in a study of the current military rejectee referral process as it relates to vocational rehabilitation.

Responsibility: Department of Vocational Rehabilitation, Virginia Employment Commission, and Department of Health.

Implementation: (1) In VEC and the Department of Health, the directors responsible for the rejectee programs would be assigned to the study group. DVR would assign the Director of Related Programs to this group. (2) Study the military rejectee referral process beginning with our evaluation of counselor effectiveness at the Armed Forces Examining Stations and extend the study to a consideration of the agencies' provision for services and their follow-up programs.

Costs: None

Interim 32: Establish a speakers' program for high schools to inform students of opportunities in vocational rehabilitation counseling and to advise them about preparing for such a career.

Responsibility: DVR, CVH, and all VR professional personnel

Implementation: This should be coordinated by the Director of Recruitment and could utilize avenues now available through ETV and the Virginia Council on Health and Medical Care. Coordinate with the State Council for Higher Education. All Virginia high school counselors should be visited at least once a year (by utilization of local VR personnel for visitation contacts). This program should be coordinated with the "College Day" and "Career Night" programs. Good use could be made of radio and television "spot announcements."

Costs: None

Interim 33: Emphasize the importance of establishing and maintaining "proper balance" between quality of the counselor's work and the number of "closures" realized.

Responsibility: DVR and CVH

Implementation: (1) Drop periodic quotas (numbers of closures "anticipated"), (2) finance program adequately, (3) encourage counselors to specialize, (4) follow up on the in-service training program and rationalize lower numbers of closures for closures of more difficult severity, (5) train supervisory personnel to identify severe cases as opposed to cases where "easy" closures can be obtained, and (6) place the maximum "merit" increase on the execution of optimum programs in terms of *closed rehabilitated* of all disability types; no specific closure should be promoted at the expense of others.

Costs: No increase in expenditures would be immediately evidenced, although case costs might rise as more difficult rehabilitations become frequent.

Interim 34: Stress the possibility of recruiting from more diverse backgrounds—in terms of training and preservice occupations.

Responsibility: DVR (Director of Recruitment) and CVH

Implementation: (1) Establish training programs in various institutions across the State; (2) supply prospective counselors from the high school visitation program with scholarship incentive; (3) direct the Director of Recruitment to initiate contacts with diverse elements of the student population—avoid recruitment from repetitive segments, such as Education, Sociology, etc.—and (4) in local meetings, church gatherings, professional association meetings, etc., plan to have representative for "Guest" speaker duties.

Costs: None

Interim 35: Establish a scholarship aid program for college students (undergraduate) who agree to pursue a career in VR work for at least the length of time of their scholarships (students who accept VR scholarships funding and do not enter the profession or do not remain in the profession at least the time of their scholarship would be required to compensate the agency to the extent of the unfilled term).

Responsibility: General Assembly and Governor's Advisory Committee

Implementation: Appropriation of an amount per student, per year on a graduated scale such as $500 for the first year, $750 for the second year, $1,000 for the third year, and $1,250 for the fourth year. For one student to complete the program an expenditure of $3,500 over four years would be required. If 12 students were in the program at any one time, three at each level, the cost per year would be $9,900.

Costs: FY 71—3 students @ $500 each
FY 72—3 students @ $500 each
3 students @ $750 each

Federal share	$4,200
State share	1,050

Interim 36: Further study of training programs and vocational rehabilitation curricula is needed to facilitate development of adequate programs at colleges and universities in Virginia.

Responsibility: DVR (Director of Recruitment and Director of Training) and CVH (Director of Training)

Implementation: Coordinate with Departments of Welfare and Institutions, Mental Hygiene and Hospitals, VEC, etc., to develop a "core curriculum" for training prospective counselors.

Costs: None

Interim 37: Give special emphasis to developing in-service training programs for agency supervisors.

Responsibility: DVR (Director of Recruitment and Director of Training) and CVH (Director of Training)

Implementation: (1) Use recent college graduates in a program structured to develop executive-level supervisory personnel, (2) develop a two-part curriculum consisting of practical training in all phases of DVR work and specific and select graduate courses to be offered which deal exclusively with the executive's role and responsibilities, and (3) solicit top-level executives from VR areas and other professions for in-service communications with emerging supervisory staff.

Costs: None

Interim 38: Consider increased counselor specialization as program grows.

Responsibility: DVR (Director of Training and Director of Recruitment) and CVH (Director of Training)

Implementation: (1) As the program expands, the possibility of counselor specialization becomes greater. Increased numbers of counselors can be directed into more sharply defined, specialized aspects of the VR process, and clients in categories requiring these specialties are better served. (2) Counselors can become more proficient in selected areas when in-service programs are structured for specialization.

Costs: None

Interim 39: Develop an in-service curriculum which emphasizes more practical training (knowledge).

Responsibility: DVR (Director of Training) and CVH (Director of Training)

Implementation: (1) Develop executive training program for supervisory personnel; (2) additional in-service training for all personnel; on-the-job training for all personnel, particularly early in vocational rehabilitation employment, with emphasis on concepts and practices of singular import to counselors; and (3) interagency cooperative training.

Costs: None

Interim 40: Define specific times for counselors and supervisors to participate in in-service training programs.

Responsibility: DVR (Director of Training) and CVH (Director of Training)

Implementation: (1) Expand in-service training programs to include training at the time of initial employment in vocational rehabilitation and again at stated intervals, and in specific programs. (2) Coordinate training meetings with visitations planned by national figures in vocational rehabilitation work.

Costs: None

Interim 41: Provide professional personnel (counselors, supervisors, etc.) more time for professional development.

Responsibility: DVR (Director of Recruitment and Director of Training) and CVH (Director of Training)

Implementation: (1) Agency should provide expenses each year for attendance at national meetings of professional importance to vocational rehabilitation personnel. (2) Invite professionals in vocational rehabilitation work to visit the State agencies and to lecture to area personnel in a series of Statewide appearances.

Costs: None

Interim 42: Adjust promotion process for counselors in DVR and CVH by creating counselor "D" category for senior counselors.

Responsibility: DVR and CVH

Implementation: (1) Add counselor "D" category with six "steps": $9,600 to $12,528; and (2) add three "D" positions in CVH and seventeen in DVR.

Costs: FY 71—Total cost(a):

1. 20 positions	Federal share	$ 6,912
2. $432 increase first year	State share	1,728
3. $432 x 20 = $8,640		

Total cost(b):

1. 20 positions	Federal share	$153,000
2. $9,600 (first year)	State share	39,000
3. $9,600 x 20 = $192,000		

Total cost(c):

1. 20 positions	Federal share	$ 46,848
2. $2,928	State share	11,712
3. $2,928 x 20 = $58,560		

(a) Begin 1971 with the first increment, 20 positions filled moving into "D" status.

(b) Begin 1971, 20 new positions.

(c) Total cost, 1971 to 1977 for 20 positions moving from $9,600 to $12,528.

Interim 43: Adjust supervisors' salary scales upward.

Responsibility: DVR, CVH, and Governor's Advisory Committee

Implementation: (1) Implement study of DVR position and classification. (2) FY 1971: 10 percent increase for area and unit supervisor $8,995 x 0.1 = $899.50 x the number of supervisors (20); and FY 1971: 10 percent increase for program supervisor $10,181 x 0.1 = $1,018 x 10 = $10,181.

Costs:	Federal share	$22,545
	State share	5,636

Interim 44: Recruit and train supervisors from outside the program or from counselors showing a marked aptitude for executive positions.

Responsibility: DVR (Director of Recruitment and Director of Training)

Implementation: (1) Develop a DVR in-service executive training program, (2) incorporate current three stages of training furnished by the University of Richmond, and (3) expand the above program as needed for individual candidates being trained for specialized positions.

Costs: None

Interim 45: Introduce a fully computerized record-keeping system in DVR.

Responsibility: DVR

Implementation: (1) Assess the need and determine the specifications of a system adequate for handling the types of operations planned by the DVR system analyst; (2) evaluate the relative cost and satisfaction of various systems; (3) acquire a system that satisfies the demand through at least 1975; (4) adapt the existing data handling process in the most expedient manner, leading to easy and rapid conversion to computer processing; (5) make provision for adequate tape and disk units for complete storage of files that are of both permanent and temporary types; (6) define problems that are essential to the structuring of emerging VR services within the next decade, and structure the data collection process and computer analysis(es) so as to provide information relative to the questions; and (7) cooperate with the Division of Planning and Community Affairs to coordinate State's electronic data processing.

Costs: (Costs should be determined following consultation with representatives of several companies. Costs, in general, will vary much more with respect to system requirements rather than among companies.)

LONG-RANGE RECOMMENDATIONS

Long Range 1: Establish a regional comprehensive rehabilitation center in each of the following DVR Administrative Areas: Roanoke, South Boston, and Richmond.

Responsibility: DVR

Implementation: Construct and equip three comprehensive rehabilitation centers.

Costs:	Construction and equipment:	
	Federal share	$20,472,150
	State share	15,590,850
	Annual operating expenses:	
	Federal share	$ 7,200,000
	State share	1,800,000

(See page 18)

Long Range 2: Expand the Rehabilitation Adjustment Training Center for the Blind by 1973.

Responsibility: CVH

Implementation: Additional construction and equipment.

Costs: Construction and equipment:

Federal share	$571,000
State share	424,000

Operating cost: FY 73—$360,000; FY 74—$360,000; FY 75—$360,000 (Costs covered under recommended appropriations for the agency. This includes salaries for 22 professional, 8 clerical, and 14 service personnel.)

Long Range 3: Increase appropriations for CVH in order to rehabilitate more clients.

Responsibility: General Assembly and CVH

Implementation: FY 73—$833,000; FY 74—$966,000; FY 75—$1,100,000. This is based on increases of approximately 246 rehabilitations in FY 73, 272 rehabilitations in FY 74, and 295 rehabilitations in FY 75. It includes additional personnel costs of $230,000 per year for 12 professional and 5 clerical.

Costs: Federal share	$2,319,200
State share	579,800

Long Range 4: Increase the number of counselor aides.

Responsibility: DVR (Director of Recruitment, Director of Training)

Implementation: Employ and/or train: FY 73—20 counselor aides "A," FY 74—25 counselor aides "A," and FY 75—30 counselor aides "A."

Costs: FY 73—Federal share	$ 73,920	FY 75—Federal share	$116,928
State share	18,480	State share	29,232
FY 74—Federal share	$ 94,272		
State share	23,568		

Long Range 5: Expand VR personnel of CVH to meet all needs by 1975.

Responsibility: CVH and General Assembly

Implementation: Secure funds for and employ additional staff—12 professional and 5 clerical.

Costs: FY 73—$230,000; FY 74—$230,000; FY 75—$230,000 (Costs covered in increased appropriations.)

Long Range 6: Continue the work evaluation unit in the Charlottesville Workshop for the Blind and establish a new unit in Richmond in conjunction with the Richmond Workshop for the Blind.

Responsibility: CVH

Implementation: Obtain funds for and employ one unit supervisor, three work evaluators, one social worker, one placement specialist, and one clerk-steno "B."

Costs: FY 73	$120,000
FY 74	120,000
FY 75	120,000
	$360,000
Federal share	$288,000
State share	72,000

Long Range 7: Continue the expanded business enterprise program (CVH).

Responsibility: CVH

Implementation: Obtain funds in the amount of $96,000 for FY 73; $98,000 for FY 74; and $99,000 for FY 75. This would enable the agency to serve 70 clients in FY 73, 74 clients in FY 74, and 78 clients in FY 75.

Costs: Federal share	$234,400
State share	58,600

Long Range 8: Continue the vocational rehabilitation part of Home Teaching—Rehabilitation Cooperative Program of CVH.

Responsibility: CVH

Implementation: Obtain funds for program.

Costs: FY 73	$160,000
FY 74	162,000
FY 75	165,000
	$487,000
Federal share	$389,600
State share	97,400

Long Range 9: Initiate a master plan for the development and establishment of DVR operated half-way houses as transitional environments for the following client populations: (1) alcoholics, (2) public offenders, (3) transitional mentally ill and mentally retarded.

Responsibility: DVR (Director of Community Rehabilitation Facilities and Area Coordinators of Rehabilitation Facilities)

Implementation: Obtain support grants from the Rehabilitation Services Administration and the National Institute of Mental Health, which are available on a time-limited basis. The establishment of half-way houses requires, however, surveys of need in given communities; coordination with existing centers, facilities, and hospitals; and extensive planning of the type of half-way house (e.g., only residential or professional rehabilitation services).

Costs: Costs will depend on types of half-way houses established.

Long Range 10: There should be further study of training programs and vocational rehabilitation curricula to facilitate development of adequate programs at colleges and universities in Virginia.

Responsibility: DVR (Division of Research and Director of Training) and CVH (Director of Training)

Implementation: Consider developing such a program at one to three state institutions of higher education.

Costs: Not available

Long Range 11: Expand college scholarship aid program (undergraduate) to provide for increasing costs and increasing need for vocational rehabilitation personnel.

Responsibility: DVR (Director of Recruitment and Director of Training) and CVH (Director of Training)

Implementation: (1973-1975) Revise the graduated scale to $650 for the first year; $900 for the second; $1,050 for the third; and $1,400 for the fourth year. For one student for one four-year study program: cost = $4,000. If twelve students were in the program, three at each level, the annual cost = $12,000. Annual cost would be as follows:

FY 73 (3 students at $650 each + 3 students at $900 each + 3 students at $1,050 each) = $7,800
FY 74 (3 at $650, 3 at $900, 3 at $1,050, and 3 at $1,400) = $12,000
FY 75 (3 at each level from 1974 on) = $12,000

Costs: Federal share $25,440
State share 6,360

Long Range 12: Expand recruitment and training of supervisors through in-service programs for executives sponsored by DVR.

Responsibility: DVR (Director of Training and Director of Recruitment)

Implementation: (1) Continue the development of the original program. (2) Numbers of supervisors needed at various levels have been added in reporting of costs for the seven comprehensive centers. Additional personnel is required if the agency expands units, central office staffing, etc. (3) Place middle-range supervisory personnel back in counseling when their administrative and executive capabilities fail to meet expectations. Use a new counselor classification "D," if seniority warrants

Costs: None

TABLE 0.2—Summary of Estimated Costs, 1968-75*

Year	*Federal*	*State*	*Total*
1968	$ 15,000	$ 180,000	$ 195,000
1969	2,151,087	1,067,884	3,218,971
1970	3,689,295	1,536,658	5,225,953
1971	17,035,327	12,202,425	29,237,752
1972	8,616,876	2,204,214	10,821,090
1973	29,831,624	18,261,969	48,093,593
1974	16,137,444	4,084,724	20,222,168
1975	16,287,472	4,097,482	20,384,954
	$93,764,125	$43,635,356	$137,399,481

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* This relates to the funding requirements of the recommendations of the Governor's Study Commission only. For the funding necessary to meet total estimated need by 1975 see the following section of the report. "An Ideal Working Plan."

TABLE 0.3—Summary of Estimated Manpower Needs, 1968-75*

Year	*Professional* (a)	*Counselors*	*Instructors & Evaluators*	*Other* (b)	*Clerical*	*Service*
1968	0	1	0	0	1	0
1969	10	24	9	0	18	0
1970	4	26	4	0	17	0
1971	30	37	9	10	37	0
1972	49	16	46	45	37	65
1973	12	25	15	20	19	14
1974	123	39	138	130	102	174
1975	0	0	0	30	0	0
	228	168	221	235	231	253

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* This relates to the manpower requirements of these recommendations only.

(a) Includes administrative, medical

(b) Includes aides and attendants

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Chapter I

INTRODUCTION

Establishment of the Statewide Planning Program

The Virginia Board of Vocational Rehabilitation, on assuming its responsibilities on July 1, 1964, recognized the necessity for an immediate study of the vocational rehabilitation needs and opportunities of the disabled in Virginia. In August, 1964, the Board employed Harbridge House, Inc., Boston, Massachusetts, to conduct a study and to recommend methods by which the Department could serve a greater number of Virginia disabled. The final report provided sufficient information for the Board to develop plans for the expansion of vocational rehabilitation services, but the most important result was to point out the urgent need for a comprehensive study. Congress, in the Vocational Rehabilitation Amendments of 1965, made Federal funds available for conducting a two-year comprehensive statewide study on vocational rehabilitation in each of the states.

Governor Mills E. Godwin, Jr., designated the Department of Vocational Rehabilitation as the State agency to sponsor the study in Virginia. The Virginia Commission for the Visually Handicapped was named as associate sponsor.

On March 1, 1966, the Department of Vocational Rehabilitation requested a planning grant for Comprehensive Statewide Planning. This grant was approved in the amount of $82,023 in April, 1966. The effective date of the award was September 1, 1966. A continuation grant for the second year of the project, in the amount of $100,000, was subsequently approved.

In September, 1966, Mr. Fred Wygal was employed as Project Director. Mr. Wygal subsequently resigned in December, 1966.

Governor Mills E. Godwin, Jr., appointed eighteen members to the Governor's Study Commission on January 5, 1967. The commission members were composed of representatives from the State Legislature, organized labor, public education, higher education, medicine, business, the disabled, and various geographical areas of the State. The responsibility of the Study Commission was to oversee the two-year comprehensive study.

Dr. Edward Cooke became Project Director on February 15, 1967. A contract was executed with the Institute of Government, University of Virginia, to carry out the principal research and survey aspects of the project. Dr. Lewis Bowman of the Institute of Government, University of Virginia, was named Research Director on February 27, 1967.

The organizational meeting of the Governors' Study Commission was held on February 20, 1967. Short talks were made by Governor Godwin, Mr. Harry Schwarzschild, Chairman of the Virginia Board of Vocational Rehabilitation, Mr. Don W. Russell, Commissioner of the Department of Vocational Rehabilitation, and Mr. William T. Coppage, Director of the Commission for the Visually Handicapped.

On May 15 and 16, 1967, the Statewide Task Forces were organized. Members of the Governor's Study Commission were appointed to each of the Task Forces and a chairman was designated.

All Task Forces completed their reports by August 9, 1968. The Study Commission, at its final meeting on August 16, 1968, reviewed all recommendations before presentation to the Governor.

Statement of Purpose

The purpose of the Comprehensive Statewide Planning Project was to evaluate the program of vocational rehabilitation in Virginia; to develop base line date for intrastate and interstate comparisons; to ascertain the gaps in the current programs; to estimate future vocational rehabilitation needs; and to provide the Governor, through the Governor's Study Commission on Vocational Rehabilitation, with a plan for a program which can be implemented by 1975, so as to provide vocational rehabilitation services to all disabled persons in Virginia.

Emphasis was placed on the orderly development of services, building upon established programs, and increased coordination among those agencies serving the disabled. The framework for development is based upon the concept of minimizing duplication of services among the agencies, both public and private, which participate in the rehabilitation process.

Scope of the Program

In order to arrive at significant and meaningful recommendations, the study included:

1. Identification by number and category those disabled within the State who are in need of vocational rehabilitation services.

2. Determination of the need for an utilization of special facilities, evaluation centers, and workshops for the disabled.

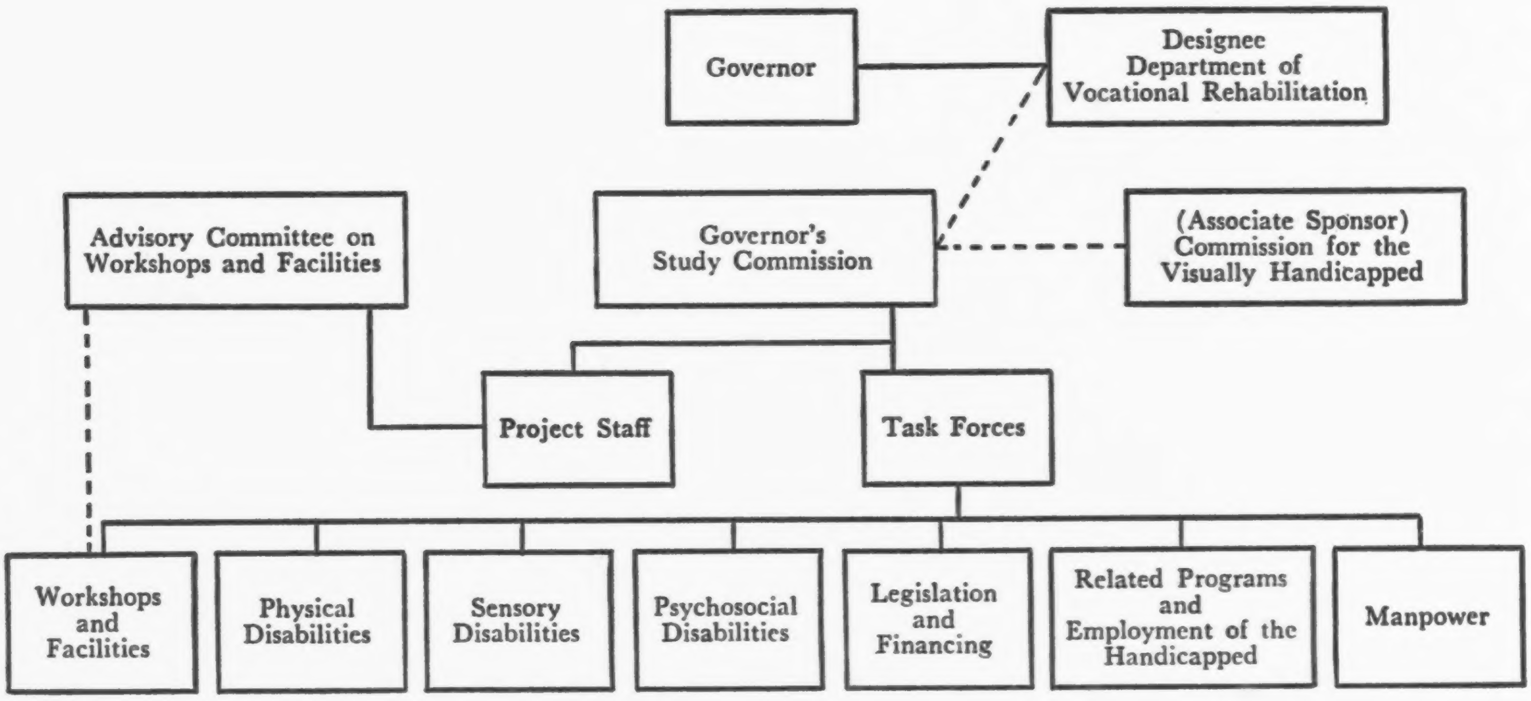
3. Identification of barriers which prevent or delay needed vocational rehabilitation services for the handicapped.

4. Determination of ways in which governmental and voluntary programs may be coordinated and reorganized, if necessary, in developing services to more effectively meet demonstrated needs.

5. Preparation of a written plan which identifies, analyzes, and evaluates program goals, the staff and financial support needed to achieve these goals with full geographic coverage of all programs offering vocational rehabilitation services.

6. Recommendations for steps required to expedite the achievement of goals among the government and voluntary programs at both state and local levels through legislative action, administrative action, and community support.

CHART 1.1—The Planning Organization


Governor
Designee Department of Vocational Rehabilitation
Advisory Committee on Workshops and Facilities
Governor's Study Commission
(Associate Sponsor) Commission for the Visually Handicapped
Project Staff
Task Forces
Workshops and Facilities
Physical Disabilities
Sensory Disabilities
Psychosocial Disabilities
Legislation and Financing
Related Programs and Employment of the Handicapped
Manpower

Chapter II

THE PLANNING ORGANIZATION

Designated Organization

In Virginia the organization designated to carry out Statewide Comprehensive Planning for Vocational Rehabilitation was the Department of Vocational Rehabilitation. The Commission for the Visually Handicapped was named associate sponsor. Agency personnel were utilized as consultants and served in other supplemental capacities, but were not involved generally in conducting the study. The primary functions of the designated agencies were to serve as fiscal agent and in consultative capacities.

The Governor's Study Commission

In order to make recommendations to the Governor for his final consideration, it was felt necessary that a group of experts and genuinely interested persons should examine and review all aspects of the Project Staff's activities. Accordingly, the Governor appointed 18 individuals to serve as members of the Governor's Study Commission. This Commission had the responsibility for guiding the operation of the Project Staff and for making recommendations to the Governor. The Commission consisted of the following members:

Louis Spilman, Chairman
Member of Board of Trustees of Ferrum Junior College. Mr. Spilman was on a committee to negotiate with the federal government to secure Woodrow Wilson Army Hospital for the State and Augusta County.

L. Lee Bean, Vice-Chairman
President and Legal Advisor to the National Orthopaedic and Rehabilitation Hospital; Board of Visitors of Radford College.

The Honorable George S. Aldhizer, II
Member of House of Delegates 1950-54; elected to State Senate in 1954.

O. F. R. Bruce, Jr.
Chief of Research, Statistics and Information Division Virginia Employment Commission

Julian F. Carper
Southeastern Regional Advisory Manpower Commission; Vice-President, Virginia State AFL-CIO, 1956-66; President, 1966 to present time.

F. H. Christopher
Assistant Superintendent of Franklin City School System.

The Honorable Marion G. Galland
Member of Virginia House of Delegates in 1964 to present time.

Howard W. Gwaltney
President of Gwaltney, Incorporated, and Bank of Smithfield; Board of Trustees of Ferrum Junior College.

Dr. A. A. Kirk
Orthopaedic surgeon in Portsmouth, Virginia; President of Staff of Portsmouth General Hospital; consultant at U. S. Naval Hospital; founder and Vice-President, Kirk-Cone Rehabilitation Center in Portsmouth, Virginia.

William R. Langner
President of Cordet, Incorporated; Executive Director of Commonwealth Tutoring Service.

The Honorable Paul W. Manns
Member of Legislative Advisory Council of the Southern Regional Educational Board; Member of Virginia House of Delegates, 1952, State Senate from 1966 until present time.

J. Leonard Mauck
Superintendent of Schools, Smyth County, Virginia; member of State Superintendents' Advisory Council; member of Board of Visitors of Madison College.

Sumpter Priddy, Jr.
Executive Director of Virginia Retail Merchants Association; member of Board of Virginia Heart Association; Chairman of the Board of Trustees of Hanover Academy.

The Honorable John R. Sears, Jr.
Member of Virginia House of Delegates; President, Norfolk Chamber of Commerce; President, Home Federal Savings and Loan Association.

Dr. James T. Tucker
Chief Surgeon, Crippled Children's Hospital, Richmond, Virginia.

W. Lovell Turner
General Supervisor of Nansemond County Schools.

Mrs. William Page Williams
Board Member of Virginia Tuberculosis and Respiratory Disease Association; member of Brookneal Medical Services Commission; member, Campbell County Chamber of Commerce.

Dr. Robert J. Young
Academic Dean, Radford College (retired)

Statewide Advisory Council

The Governor's Study Commission did not appoint a Statewide Advisory Council. Instead, Commission members served also in the capacity of Advisory Council members. The Commission, when considering the function of such a council, felt that it would involve itself in such areas as incidence of disability, coordination between DVR and related programs (on federal, state, and local levels), and DVR interaction with private agencies. The Commission also felt that such a council would assemble and integrate local material and relate it to categorical areas of rehabilitation.

The extensive research plan, as proposed by the Institute of Government, University of Virginia, was constructed to operate in precisely the areas as those mentioned above. In view of this, the Study Commission decided to utilize the services of the research teams and the Task Forces—rather than appoint a Statewide Advisory Council.

Task Forces

The Governor's Study Commission created seven Task Forces. Members of the Commission were appointed to each of the Task Forces and a chairman was designated. Some of the Task Forces consisted of professional experts who analyzed the materials on hand, requested from the Project Staff additional studies and further information, coordinated suggestions and presented one reconciled set of recommendations to the Governor's Study Commission for presentation to the Governor. Other of the Task Forces included only members of Virginia Governor's Study Commission on Vocational Rehabilitation. The seven Task Forces and their members were:

1. *Workshops and Facilities*
   Objectives:
   a. To inventory existing workshops and rehabilitation facilities within the State, or which could readily be utilized although located outside the State, and to describe the services provided therein.
   b. To evaluate utilization patterns of existing workshops and facilities and their utilization potential.
   c. To determine the needs for new workshops and rehabilitation facilities throughout the State, including:
      (1) Relative needs on a geographical and disability basis and
      (2) A priority list of programmed projects over a short-range period.

Members (Same as Advisory Committee on Workshops and Facilities):

The Honorable John R. Sears, Jr., Chairman
Member of the Virginia General Assembly

Julian F. Carper
President, Virginia State AFL-CIO

Dr. A. A. Kirk
Founder and Vice-President, Kirk-Cone Rehabilitation Center

William R. Langner
Executive Director of Commonwealth Tutoring Service

L. Eugene Adair
Executive Director of Norfolk Goodwill Industries

Richard M. Valentine
Executive Director of Northern Virginia Occupational Center

Robert B. Traweek
Director, Virginia Association for Retarded Children

George E. Robertson
Board member of Southside Workshop. P & R Business Machines Owner

Legrand Ailstock
Union President

Edward D. Gasson
Attorney, Fairfax County

The Honorable Dorothy S. McDiarmid
Member of the Virginia General Assembly

Dr. Henderson P. Graham
President, Smyth County Community Hospital; dentist

Dr. J. A. Maultsby
Surgeon

Reginald M. Wood
President, Securities Insurance Corporation

Louie L. Scribner
Stainback & Scribner Architects

J. Douglas Butler
Manager, Green Chemical Company

Mrs. L. H. Howard, Jr.
Junior League

Alexander H. Kyrus
Director, Tidewater Vocational Center, Inc.

2. *Physical Disabilities*

   a. Cardio-Vascular System
   b. Genito-Urinary System
   c. Endocrine System
   d. Gastro-Intestinal System
   e. Musculoskeletal System
   f. Neurological System
   g. Respiratory System
   h. Other categories including cancer

   Objective:

   This task force examined existing levels of services available to persons with physical disabilities. It was primarily concerned with the evaluation of rehabilitation services in light of modern techniques of medicine and opportunities in education.

   This task force made recommendations about what could be done to better meet the needs of individuals in the sub-areas of physical disabilities.

   Members:

   Dr. A. A. Kirk, Chairman
   Founder and Vice-President, Kirk-Cone Rehabilitation Center

   Dr. James T. Tucker
   Chief Surgeon, Crippled Children's Hospital
   Richmond, Virginia

   Dr. Treacy O'Hanlan
   Surgeon; Consultant at Woodrow Wilson Rehabilitation Center

   R. I. Howard
   Executive Director, Medical Society of Virginia

3. *Sensory Disabilities*

   a. Blind and Visually Impaired
   b. Deaf and Hard of Hearing
   c. Speech Impaired

   Objective:

   To study the services presently available for persons having sensory disabilities and identify the kind of services this group needs.

   As a matter of convenience and because speech impairment is closely related to hearing, those persons with a speech impediment are included in this category.

   Members:

   Sumpter Priddy, Jr.
   Executive Director, Virginia Retail Merchants Association

   Mrs. William Page Williams
   Member, Virginia Tuberculosis Association;
   Member, Brookneal Medical Services Commission

   William T. Coppage
   Director, Virginia Commission for the Visually Handicapped

   Joseph Wiggins
   Supervisor of Rehabilitation Services, Virginia Commission for the Visually Handicapped

4. *Psychosocial Disabilities*

   a. Mentally Retarded
   b. Mentally Ill
   c. Emotionally Disturbed
   d. Public Offender (Youth)
   e. Alcoholism

   Objectives:

   a. Examine the rehabilitation needs of persons with one or more of these disabilities.
   b. Examine the pattern of services provided to this disability group by state-operated agencies and by private nonprofit organizations.
   c. Identify unmet needs of this disability group.
   (*Note*: Studies already made in the areas of mental retardation, mental health, etc., were used as a resource.)

   Members:

   The Honorable Paul W. Mann, Chairman
   State Senator

   F. H. Christopher
   Assistant Superintendent, Franklin City School System

   Mrs. Marion G. Galland
   Member, Virginia House of Delegates

5. *Legislation and Financing*

   a. Evaluate present means of financing existing vocational rehabilitation programs.
   b. Examine present state and federal legislation as it relates to vocational rehabilitation.

c. Architectural Barriers
d. Workmen's Compensation—Second Injury

Objectives:

a. Recommendation of legislation which will provide more comprehensive services.

b. Examine studies and legislation on architectural barriers and to determine to what extent architectural barriers impede or prevent the use of buildings and facilities.

c. Report on progress of what is being done by both public and nonprofit agencies to eliminate architectural barriers.

d. Review legislation and methods of financing second-injury clause provisions in other states and to make recommendations for Virginia.

Members:

L. Lee Bean, Chairman
President and legal advisor to National Orthopaedic and Rehabilitation Hospital

The Honorable George S. Aldhizer, II
State Senator

6. *Related Programs and Employment of the Handicapped*

    a. Social Security
    b. Office of Economic Opportunity
    c. Public Welfare
    d. Public Health
    e. Military Rejectees
    f. Employment Service

Objectives:

a. This task force studied specific recipient population groups served by related programs as the related programs pertain to Vocational Rehabilitation and the functions of the Rehabilitation Agency.

b. This task force identified the existing barriers and prejudices confronting the handicapped person seeking employment. The work of this task force made specific recommendations concerning the best possible employment practices of the handicapped person.

Members:

O. F. R. Bruce, Chairman
Chief of Research, Statistics and Information Division Virginia Employment Commission

J. Leonard Mauck
Superintendent of Schools, Smyth County

Howard W. Gwaltney
President, Gwaltney, Inc., and Bank of Smithfield

William R. Langner
Executive Director, Commonwealth Tutoring Service

7. *Manpower*

    a. Needs
    b. Training—Classification
    c. Selection—Recruitment
    d. Orientation and in-service training
    e. Salary

Objective:

This task force reviewed current practices in regard to the manpower needs of the Department of Vocational Rehabilitation in light of the listed subcategories. Recommendations were made concerning the future manpower needs of the department.

Members:

Dr. Robert Young, Chairman
Dean of Students and Academic Dean, Radford College (retired)

W. Lovell Turner
General Supervisor, Nansemond County Schools

Subcontract

The Institute of Government of the University of Virginia officially associated itself with the organization, goals and operations of the Project and, under specific contract, agreed to carry out the principal research and survey aspects of the Project.

The Institute of Government agreed to carry out research and survey activities necessary to:

1. Identify by number and category those disabled currently residing in the State who are in need of vocational rehabilitation services, and to make projections concerning such disabled persons and their rehabilitation needs through 1975.

2. To determine the present levels (scope, quantity, and quality) of rehabilitation services available to the disabled in Virginia, the services required to meet the entire need, the gaps which exist, and the most practical means through which these unmet needs may be fulfilled. The study resources, both current and projected, were to include those provided by the two public vocational rehabilitation agencies (the Department of Vocational Rehabilitation and the Commission for the Visually Handicapped), as well as other public agencies and private non-profit agencies which now provide or which may in the future provide vocational rehabilitation services to disabled citizens of the State. In carrying out this area of investigation, the Institute of Government was to take into account the Statewide study of rehabilitation facilities and workshops which was being conducted concurrently by the Department of Vocational Rehabilitation.

Interagency Liaison

During the Statewide study, liaison was maintained with other state agencies. The relationship with the Virginia Commission for the Visually Handicapped, as associate sponsor for the study, was quite close. Rehabilitation counselors and other staff members completed questionnaires and provided information when requested and made a significant contribution to the study.

The State Employment Commission was closely involved in the study. The local office counselors provided valuable information concerning employment of the handicapped. This was done by means of a questionnaire which they completed and returned. They were also of great assistance in providing answers to questions concerning the Manpower Development and Training Act program.

There was also liaison with the State Department of Health, particularly in the areas of their military rejectee program and their visiting nurse program.

The Staff

Full-Time:

The project staff consists of a director, a coordinator of field services, research director, two research associates, and three secretaries. Their major responsibility has been to compile statistics; assist the Task Forces, identify the disabled; determine the need for special facilities and workshops, study agency coordination, communication, and cooperation; measure professional and public support; and study existing vocational rehabilitation services.

Staff Members:

Dr. Edward Cooke
Project Director

Dr. Lewis Bowman
Research Director

Dr. Dennis Ippolito
Research Associate

Dr. William Donaldson
Research Associate

George Meeks
Coordinator of Field Studies

Mrs. Nancy Nyman
Research Assistant

Mrs. Terry Downey
Secretary

Mrs. Mary Ann Heagle
Secretary

Part-Time Staff:

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Charlottesville

Robert Preston Steed
Charlottesville

Dr. Lorenzo Tucker Gibson, J
Charlottesville

Clair W. Matz, Jr.
Charlottesville

Joseph R. Rudolph
Charlottesville

James Walters
Charlottesville

Grady Lloyd
Charlottesville

Clerical

Mrs. Carol A. Mallory
Charlottesville

Mrs. Sarah B. Forman
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Mrs. Angela DeMatteo
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Walter A. Marston, Jr.
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Colonial Heights

Miss Elizabeth Broaddus
Hopewell

Miss Marjorie Dyson
Petersburg

Fred Tunnel
McKenney

Herbert Gilliam
Hopewell

Miss Carolyn Hill
Disputanta

Wade Cothran, IV
Staunton

Miss Sarah M. Palmer
Staunton

Gary Robertson
Waynesboro

Joseph A. Bell
Staunton

Miss Margaret A. Rhodes
Stuarts Draft

William H. Jeffres, Jr.
Lexington

Mrs. Theresa Brown
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Mrs. Edith Howard
Petersburg

Miss Nancy Poole
Stony Creek

Miss Vivian Bland
Petersburg

Arnold Westbrook
Petersburg

Miss Cynthia L. Bradley
Waynesboro

Miss Elizabeth Reynolds
Waynesboro

Miss Mary E. Cline
Waynesboro

Miss Marion Duke
Staunton

Mrs. Katherine L. Moran
Staunton

Mrs. Claudyne R. Palmer
Staunton

Mrs. Diane S. Wilkinson
Norfolk

Mrs. Lois Boles
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Mrs. Carol P. Palmer
Alexandria

Mrs. Vera J. Crawford
Alexandria

Col. Donald D. Crawford
Alexandria

Archie M. Andrews, III
Alexandria

Miss Mildred P. Carter
Richmond

George H. Heller
Richmond

William W. Roberts
Richmond

Miss Addie O. Hardy
Norfolk

Elsmer H. Stewart
Norfolk

John L. Cote
Norfolk

Archie D. Johnson, III
Norfolk

Mac A. Phipps
Bristol

Gary Rosenbaum
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Mrs. Ingrida Bowling
Virginia Beach

Mrs. Florence Gay
Norfolk

Herbert E. Watson, Jr.
Norfolk

Mrs. Susan Y. Breed
Norfolk

Miss Cynthia M. Bostain
Virginia Beach

Mrs. Betty R. Dunwoody
Norfolk

Mrs. Phyllis D. Shofner
Norfolk

Mrs. Judith F. Ahern
Norfolk

Mrs. Sarah C. Jeter
Alexandria

Mrs. Calleen G. Parent
Alexandria

Noel Barrett
Mount Vernon

Alfred A. Bachaud
Fairfax

Miss Virginia Cheuvront
Alexandria

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Mrs. Mary Gilly
Big Stone Gap

Mrs. Nancy Greet
Big Stone Gap

Mrs. Ruby Bull
Appalachia

Mrs. Virginia Helbert
Coeburn

Mrs. Audrey Revels
Appalachia

Mrs. Nilda Williams
Big Stone Gap

Mrs. Juanita Stone
Big Stone Gap

Mrs. Maudella A. Varner
Wise

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St. Paul

Mrs. Myrna Barden
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Mrs. Charlotte W. Ambrose
Norfolk

Mrs. Patricia J. Hull
Norfolk

Miss Marian M. Gibbs
Norfolk

Jesse W. Dunwoody, Jr.
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Big Stone Gap

Mrs. Phyllis Horne
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Mrs. Ruth Maggard
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Mrs. Norma Stallard
Wise

Dana Chisenhall
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Mrs. Wanda Barker
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Chapter III

METHOD OF OPERATION

Planning For Total Needs

Developing total and perfect public services for any program is probably impossible. Yet planning for future programs which does not take total needs into account is both inefficient and self-deluding. With this in mind, this Commission wrote recommendations calculated to provide services for all individuals needing vocational rehabilitation services by 1975.

In collecting the necessary information to plan for meeting total needs the Commission did not concentrate on any single aspect of the vocational rehabilitation programs. For example, it did not emphasize scrutiny of the administrative structures of the vocational rehabilitation agencies while neglecting the many other aspects of the total programs. Rather, the Commission contracted for surveys of a cross section of several Virginia communities, for a survey of professional vocational rehabilitation personnel, for a survey of a cross section of vocational rehabilitation clients, and for surveys of professional personnel in related programs. This approach spread the information net widely enough to identify barriers and problems in the State's entire vocational rehabilitation system.

Also, by emphasizing planning for total needs, the study recognized the interrelationships of the many problems confronting all health, education, and welfare programs. This does not mean that problem areas in the current programs were ignored. It means that the research suggested recommendations both for eradicating identifiable current problems and for preventing anticipated problems.

Research Design

This emphasis on planning based on comprehensive research was reflected in the early activities of the project staff. March through April of 1967 was devoted to acquiring a competent staff, surveying the literature about vocational rehabilitation, and deriving a research design for the remainder of the planning period. Table 3.1 summarizes the potential sources of new information which the research staff discussed with the Governor's Study Commission on Vocational Rehabilitation at its May 1967 meeting.

Utilization Of Data

The research staff advised the commission to concentrate on selected surveys and case record sources. Eventually data needs and the inevitable practical limitations of timing, funding, and manpower dictated a choice of selected surveys and case record inventories rather than the happier but utopian ideal of considering "everything."

Surveys of General Population: Five Communities:

Surveys of general populations in five Virginia communities were conducted during 1967 and early

TABLE 3.1—Potential Data Sources for Developing Adequate Information for Statewide Comprehensive Planning

Data Source	*Would Aid This Research Task*(a)				
	1	*2*	*3*	*4*	*5*
Surveys					
General populations					
State	X	X	X	X	X
Community	X	X	X	X	X
Community-in-depth	X	X	X	X	X
VR's clientele					
Closed, rehabilitated		X	X	X	X
Closed, not rehabilitated		X	X	X	X
Closed, from referral		X	X	X	X
Pending action		X	X	X	X
Accepted		X	X	X	X
VR specialists					
DVR	X	X	X	X	X
CVH	X	X	X	X	X
Related agencies	X	X	X	X	X
Data inventories					
Case records					
DVR	X	X	X	X	X
CVH	X	X	X	X	X
Related agencies	X	X	X	X	X
NRA referral data	X	X	X	X	X
Military rejectees	X	X	X	X	X
Educational census	X	X	X	X	X
State demographic	X	X	X	X	X
Medical records	X	X	X	X	X
Employment data		X	X	X	X
VR manpower		X	X	X	X

(a) The definitions of these categories are:

1. To determine incidence of disability.
2. To determine the present level of VR services.
3. To estimate services needed to meet the entire VR need.
4. To establish current and future gaps in services.
5. To develop a practical plan for implementation.

1968. These five communities—Augusta County, Petersburg, Norfolk, Alexandria and Wise County —were selected on the basis of their demographic characteristics, their caseloads as reflected in DVR case records, and the geographical distribution which they provide for the state. (See Table 3.2)

The process through which these surveys of Virginia communities have been conducted includes the following procedures. First, a two-part questionnaire was devised. The first part of this questionnaire provides information on the incidence and type of disabilities within households in a given community. The second part of the questionnaire provides information about a representative cross-section of adults in the community. For these respondents, questions were designed to provide information about their personal characteristics and their knowledge and attitudes about the vocational rehabilitation program in Virginia. Second, the communities to be surveyed were selected according to the criteria noted above.

TABLE 3.2—A Profile of the Communities Surveyed: Selected Demographic Characteristics[a]

Demographic Characteristics	*Least*				*Most*
Population					
Size (Est. 1966)	Petersburg (38,000)	Augusta[b] (42,000)	Wise[c] (45,000)	Alexandria (110,000)	Norfolk (313,000)
Urban	Augusta (0%)	Wise (16.8%)	Petersburg (100%)	Alexandria (100%)	Norfolk (100%)
Change (1960-67)	Petersburg (1.5%)	Norfolk (1.6%)	Wise (–8.9%)	Augusta (15.2%)	Alexandria (24.6%)
Growth (1960-67)	Wise (–8.0%)	Petersburg (1.5%)	Norfolk (1.6%)	Augusta (15.2%)	Alexandria (24.6%)
In-migration (1960-67)	Wise (–14.7%)	Norfolk (–11.4%)	Petersburg (–8.1%)	Augusta (7.2%)	Alexandria (7.4%)
Natural Increase (1960-67)	Wise (6.9%)	Augusta (8.0%)	Petersburg (9.6%)	Norfolk (13.0%)	Alexandria (17.2%)
Unemployment	Alexandria (2.6%)	Augusta (2.7%)	Norfolk (5.1%)	Petersburg (6.2%)	Wise (9.6%)
Non-White	Wise (2.9%)	Augusta (4.4%)	Alexandria (11.7%)	Norfolk (26.4%)	Petersburg (47.3%)
Median Family Income	Wise ($3450)	Augusta ($4352)	Petersburg ($4406)	Norfolk ($4894)	Alexandria ($7207)
DVR Caseload[d] (1966)	Norfolk (93)	Augusta (113)	Alexandria (150)	Wise (241)	Petersburg (414)

(a) Various data derived from reports of the U. S. Bureau of the Census, the Virginia Department of Vocational Rehabilitation, and the Bureau of Population and Economic Research were used.

(b) Augusta County includes all of the county *except* the independent cities of Staunton and Waynesboro.

(c) Wise County includes all of the county *plus* the city of Norton.

(d) These are rather meaningless data as applied to the individual county or city because the reporting system lists the case according to where the counselor reports it rather than in terms of the residence of the client.

Third, sample designs and procedures were established to provide representative, cross-sectional samples in each of the communities that were selected. Fourth, samples were drawn in each community. Fifth, interviewers were hired and trained to administer the questionnaires to the proper respondents. Sixth, a codebook was written to incorporate the information which was gathered in the surveys so as to provide a basis for statistical analysis. Coders performed the coding operation. The last step included analyzing data from the surveys and reporting it to the Task Forces and Governor's Study Commission.

The quantity of data collected in five Virginia communities is summarized in Table 3.3.

Survey of Clients

In addition to the general population studies, a survey of Department of Vocational Rehabilitation clients was conducted. From the case records of DVR, a systematic sample of 400 persons was selected from the approximately 22,000 clients whose cases were either closed or classified as open during the fiscal year 1967.

In dealing with these clients, questionnaires were developed for each client "category." These included: (1) closed, rehabilitated; (2) closed, not rehabilitated; (3) closed from referral; (4) pending action; and (5) accepted. Thus, five questionnaires were designed to cover all of the possible statuses in which clients are designated as either closed or open cases. These questionnaires were written so as to gather information about each client's experience, knowledge, and attitudes about the vocational rehabilitation program.

Since the sample provided a cross-section of DVR clients, it included certain disability types which made personal interviews difficult. Thus, problems of locating particular clients and being able to interview them occurred. Table 3.4 summarizes the response rate for this sample.

Surveys of Vocational Rehabilitation Specialists

A mail survey of DVR and CVH professional personnel included field counselors, school unit counselors, mental and correctional unit counselors, as well as agency and program supervisors. For each of the agencies and for each of these types of personnel, questionnaires were developed to provide substantive knowledge about the supervisors' and counselors' information, attitudes, and assessment of the current vocational rehabilitation programs in Virginia. The appropriate questionnaire was then mailed to each of these persons employed by DVR and CVH.

In conjunction with this mail survey, a background study was also done for each of the counselors employed by DVR and CVH. Using a specific codebook adapted to agency records, the research staff gathered all relevant and available information about the counselors up until the time they were employed. Inasmuch as the mail survey supplemented this material by providing information after employment by the agency, relatively complete profiles were available.

The response of counselors to the mail survey was excellent (Table 3.5).

TABLE 3.3—Summary of Data Collected in the Community Surveys

Area	*Usable questionnaires*		*Response rate* (c)
	Health (a)	*Attitudinal* (b)	
	#	#	%
Augusta County	861	231	89
Petersburg	949	282	91
Alexandria	569	197	74
Norfolk	1037	337	81
Wise County	845	237	83

(a) Represents all individuals comprising the respondents' immediate (nuclear) family.

(b) Represents individual respondents chosen by area probability sampling techniques to represent a cross-section of the adult population of the area.

(c) Equal to the completed interviews divided by the total number in the sample minus the vacancies ("vacancies" defined as "no dwelling units on property" and "unoccupied dwelling units.")

TABLE 3.4—A Summary of Data Collected in the Client Survey, by Client Type and DVR Administrative Area.

Client Type	*DVR Administrative Area*							*Total* (a)
	1	*2*	*3*	*4*	*5*	*6*	*7*	
Closed								
Rehabilitated	7	8	9	12	8	13	18	75
Not								
Rehabilitated	1	0	1	3	0	1	3	9
From referral	6	4	8	9	12	18	18	75
Pending action	8	3	9	3	15	11	8	57
Accepted	6	7	11	15	13	20	12	84
Total	28	22	38	42	48	63	59	300

(a) The total sample was 400. The overall response rate is 75%.

TABLE 3.5—Returns from the Mail Survey of Vocational Rehabilitation Counselors and Supervisors in Virginia

	Usable Questionnaires #	*Total Sent* (a) #	*Response Rate* %
DVR			
Counselors	123	125	98
Field	(74)	(75)	98
School	(25)	(25)	100
Mental and Correctional	(24)	(25)	96
Supervisors	39	39	100
Central office	(12)	(12)	100
Field office	(27)	(27)	100
CVH			
Counselors	13	14	93
Supervisors[b]	2	3	67

(a) This represents the entire universe of each aggregate at the time the questionnaires were administered.

(b) One CVH supervisor had recently joined the CVH staff at the time the survey was administered. He was cooperative and very helpful, but he did not want to be included because of lack of familiarity with the agency and its programs.

In addition to these comprehensive data gatherings about DVR and CVH personnel, the research staff also surveyed the counselors of the Virginia Employment Commission. This survey ascertained their experiences in placing vocational rehabilitation clients and problems relating to interagency liaison.

Surveys of Workshops and Facilities

In cooperation with the Advisory Committee on Workshops and Facilities the research staff conducted a comprehensive inventory of all public and private rehabilitation facilities in Virginia. A staff person conducted complete on-the-spot inventories at thirty-five facilities in the State, and the operations of an additional 106 were inventoried by means of a mail questionnaire.

Case Record Study: DVR Clients

It was anticipated that the case records on file in the Richmond DVR office could be used for various types of statistical analyses, including factors such as the geographical distributions of caseloads, types of disabilities, incidence of disabilities, client categories and so forth. This type of information would be useful in providing information about referral sources, counselor caseloads, case costs, case histories and to examine the relationships between these and other factors.

The types of cards and case record systems used by DVR, however, were inadequate for these purposes. The state of client cards for previous fiscal years rendered it impossible to justify the types of statistical analyses which had been contemplated.

Therefore, a record-keeping plan was submitted to DVR to provide adequate information for analyzing these relationships for future years.

Utilization of Other Data Sources

Several of the task forces conducted on-the-site investigations into selected aspects of both the vocational rehabilitation program in Virginia and related programs. For example, the Task Force on Psychosocial Disabilities visited the State's correctional and mental institutions. Other task forces made similar efforts. The basic questions being pursued were these: How could vocational rehabilitation expand its own programs to serve more clients more efficiently and comprehensively? How could vocational rehabilitation better cooperate with related programs? Valuable information was derived through these efforts.

Public Hearings

The project staff conducted seven announced public hearings throughout the State in addition to hearings at various institutions which were less systematic and public. The public was encouraged to send complaints and suggestions directly to the research staff. Standard forms were provided for this purpose.

The presentations of interested citizens and organizations at the public hearings have been combined with the relatively large number of individual communications made directly to the research staff. These data helped pinpoint problem areas and gave insight into the cooperative efforts which vocational rehabilitation in Virginia must make if it is to provide a comprehensive program of services.

Project Schedule

By synchronizing data collection, data analysis, and data reporting the project staff provided reports to the various task forces and the Governor's Study Commission in late 1967 and through the first eight months of 1968. The following list of reports and chronology of meetings show the structuring of work through the project period.

February 1967

Organizational meeting of Governor's Study Commission

Staff development

Research contract negotiations

Meeting of National Conference on Statewide Comprehensive Planning

Contractual arrangement for research

March 1967

Literature search

Staff development

April 1967

Developing the research design

Staff development

May 1967

Meeting of Governor's Study Commission

Selection of research design

Staff development

June 1967

Planning for community surveys

Planning for client surveys

Developing questionnaires for workshops and facilities

Developing counselor background codebook

Development of material about architectural barriers

Analysis of case record data at DVR

Consultation with Vocational Rehabilitation agencies personnel throughout State about the research

Meeting with Metropolitan Washington Council of Governments to discuss cooperative planning

July 1967

Meeting of Task Force on Psychosocial Disabilities

Meeting of Task Force on Legislation and Financing

Annual Progress Report to Vocational Rehabilitation Administration

Drawing Vocational Rehabilitation client sample

Developing community survey questionnaire

Drawing Petersburg sample

Drawing Augusta County sample

August 1967

Joint meeting of Task Force on Workshops and Facilities and the Advisory Committee on Workshops and Facilities

Task Force on Psychosocial Disabilities visited correctional and mental institutions

Addendum to original research contract for additional community surveys

September 1967

Planning for additional community survey

Developing protocols and formats for analyzing data of various surveys

October 1967

Meeting of Task Force on Psychosocial Disabilities

Community survey in Norfolk

Community survey in Alexandria

November 1967

Report, *A Preliminary Report on Second Injury Fund Laws* to the Task Force on Legislation and Financing

Meeting of the Task Force on Legislation and Financing

Report, *Architectural Barriers* to the Task Force on Legislation and Financing

Meeting of National Conference on Statewide Comprehensive Planning

Community survey in Wise County

December 1967

Joint meeting of Task Force on Workshops and Facilities and the Advisory Committee on Workshops and Facilities

Meeting of Governor's Study Commission

1. Report and recommendation of Task Force on Psychosocial Disabilities
2. Report and recommendations of Task Force on Workshops and Facilities
3. Report and recommendations of Task Force on Legislation and Financing
4. Adoption of interim recommendations

January 1968

Presentation of interim recommendations to Governor Mills E. Godwin, Jr.

Development of community codebooks

Coding of community surveys

February 1968

Begin data processing on community survey

Survey of vocational rehabilitation supervisors

March 1968

Eighteen Month Program Report to Vocational Rehabilitation Administration

Meeting of Task Force on Related Programs and Employment of the Handicapped

Meeting of Task Force on Manpower

Planning for Virginia Employment Commission counselors study

Meeting of Task Force on Psychosocial Disabilities

April 1968

Report, *Views of Government and Private Involvement in Training the Handicapped in Virginia*

Data analysis

May 1968

Meeting of Region III Statewide Comprehensive Planning groups

Meeting of Task Force on Manpower

June 1968

Meeting of Task Force on Psychosocial Disabilities

Seven public hearings conducted by Governor's Study Commission

Report, *The Backgrounds and Recruitment of Vocational Rehabilitation Counselors and Supervisors in Virginia*

Report, *Rehabilitation Workshops, Facilities, and Resources in Virginia*

Report, *Workshops and Rehabilitation Facilities for the Physically Disabled in Virginia*

Report, *The Retention of Vocational Rehabilitation Personnel in Virginia*

Report, *Expenditures for Vocational Rehabilitation in Virginia, 1963-1967*

Report, *Virginia's Ranking in the U. S. on Selected Characteristics Related to Vocational Rehabilitation*

Report, *Recent Vocational Rehabilitation Caseload Data*

Report, *Employment of the Handicapped in Virginia: Direction and Potential*

July 1968

Meeting of Governor's Study Commission

Meeting of Task Force on Manpower

Meeting of Task Force on Sensory Disabilities

Meeting of Task Force on Related Programs and Employment of the Handicapped

Meeting of Task Force on Workshops and Facilities

Report, *Selected Material Relating to Sensory Disabilities in Virginia*

Report, *The Training of Vocational Rehabilitation Personnel in Virginia*

Report, *Related Programs and Vocational Rehabilitation in Virginia*

Report, *Estimation and Projection of Disability Incidence and Prevalence in Virginia*

Report, *Estimated Needs for Workshops, Rehabilitation Facility, and Comprehensive Centers in Virginia*

Report, *Public Hearings on Vocational Rehabilitation in Virginia*

August 1968

Two meetings of Governor's Study Commission

Report, *Evaluation of Vocational Rehabilitation Progress in Virginia*

Preparing final report

Developing Practical Priorities

In making recommendations designed to produce a vocational rehabilitation program to meet the estimated total needs, the Commission was aware that all its recommendations could not be implemented immediately as public policy. To structure the total plan on a practical basis, the Commission adopted a priority system for suggesting the most feasible order for implementing its recommendations. These priority categories are "action," "immediate," "soon," "interim," and "long range."

After its meeting in December of 1967, the Commission issued an *Interim Report* which included recommendations to help alleviate problems in the ongoing vocational rehabilitation programs. Those are included in the final recommendations arising from its study for completeness and because some of the same problems continue. Among the total recommendations these recommendations from the *Interim Report* are designated in an "action" priority category.

Among the new recommendations arising out of the Commission's meetings in July and August 1968, those recommendations which can be implemented during the first half of fiscal year 1969 with little additional funding or manpower are in the "immediate" priority category. Those additional recommendations which require little additional funding or manpower but may take a year or more to implement are designated by the priority category "soon."

The remaining recommendations require considerable additional funds, professional manpower, and rehabilitation facilities. This means they cannot be dealt with before the 1970 session of the Virginia General Assembly. These recommendations have been designated "interim" or "long range" depending upon whether it can reasonably be expected that they be implemented in fiscal years 1971 and 1972 or in fiscal years 1973, 1974, and 1975. The former priority category is designated "interim," and the latter is "long range."

Chapter IV

FINDINGS AND RECOMMENDATIONS

Estimates of the Incidence and Prevalence of Handicapped Persons by Categories*

Introduction

One of the most urgent problems relating to vocational rehabilitation is the estimation of current numbers of persons in several selected disability categories. The urgency of this problem is associated with the financing of more programs, renovations of existing programs, and with the question of manpower and rehabilitation facility needs in future years. The last consideration refers to both the raw numbers of personnel and facilities needed by types and to where the geographical demand for these persons and facilities will be most acute. The present study, in part, analyzes several sources of data in an attempt to define and estimate incidence and prevalence of disability categories in Virginia. Data are analyzed by both Statewide totals and the seven Departments of Vocational Rehabilitation administrative areas which have been designated as "planning areas."

Although of major interest and concern to the professional vocational rehabilitation program-administrator, very little data exist to provide bases for structuring guidelines for administrative procedures. This dearth of essential data detracts from the total effectiveness of the vocational rehabilitation services offered, and from the program in terms of planning to meet the needs of eligible persons. The sum of these two faults in the program leaves many citizens of the State of Virginia without adequate rehabilitation service in *all* disability categories.

These data are subject to several limitations. Multiple assumptions have been accepted in order to estimate current prevalence of selected disability categories and to project the incidence within the same selected disability categories for several future points in time. While cognizant of the weaknesses of the data, the estimates and projections do provide information vital to future planning. These limitations and assumptions are considered in depth in a concluding section.

Of special interest to the administrator of vocational rehabilitation services is the incidence of selected disabilities as: (1) total values for all persons in the State; (2) total incidence values for selected disability categories for the seven planning areas of the Department of Vocational Rehabilitation; (3) eligible incidence for the State; and (4) eligible incidence for the planning areas.

Earlier Efforts to Estimate Incidence

Prevalence studies can be categorized by their relative level of refinement into four levels:

1. Prevalence of impairments by broad categories only.
2. Prevalence of specific impairments (disabilities) which constitute a *vocational* handicap.
3. Prevalence of people with specific vocational handicaps who *need,* and are *eligible* for vocational rehabilitation services.
4. Prevalence of persons *needing* vocational rehabilitation services who can be *contacted* and who will be *available* and who will *accept* vocational rehabilitation services.

Level three would constitute the minimum acceptable level as an objective for a Statewide study, while level four could be considered most pertinent to immediate and future programming.

National Estimates. A report published following completion of data analyses for the 1962 Health Interview Survey provides a basis for gross estimation of disability incidence for the United States.[1] At that time the population of the nation was reported to be approximately 182 million persons.[2] Some 44.1 percent or 80,262,000 were estimated to suffer from some disease or chronic impairment; 22.2 million persons were disabled in some way that limited activity; and 16 million persons of working age were reported to be limited in their ability to carry out their major work activity such as working or keeping house. Therefore, in 1962, approximately 12.2 percent of the total population (not residing in institutions) were limited in their activities in some way and approximately 8.1 percent of these were limited to the extent that their normal functions were impaired.

In 1966, the Vocational Rehabilitation Administration estimated that 3.7 million persons were *in need of* and *eligible for* vocational rehabilitation services.

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* This section of the *Final Report* is derived from the report of Dr. William Donaldson, Research Associate of the Project Staff. See his report, No. 11 in the series, "VR in Virginia," *Incidence and Prevalence of Disabilities in Virginia* (Charlottesville, Va.: Institute of Government, July 1968).

[1] *Chronic Conditions and Activity Limitation.* National Health Survey, National Center for Health Statistics, Washington: U.S. Department of Health, Education, and Welfare, May 1965; Series 10, #17.

[2] *State Data and State Rankings,* Part 2 of 1965 Edition of Health, Education, and Welfare, TRENDS. Washington: U.S. Government Printing Office, 1965.

The reported figure was inclusive of January 1, 1966, *included* 200,000 institutionalized persons.[3] With a total population of 194 million estimated for 1965 this meant the needy and eligible proportion of the total population was roughly 2 percent.[4] If this figure of 2 percent were applied to the State of Virginia, based on an estimated 1965 population of 4,331,000 persons, some 86,700 cases of severely limiting disabilities would have been forecast for the State. During the 1965 fiscal year the Virginia Department of Vocational Rehabilitation served 11,256 cases.[5]

This method shows a rather formidable gap between the 1965 Department of Vocational Rehabilitation operation and what could have been accomplished had the agency had the finances and personnel to contact the population of needy, eligible disabled. However, this methodology does not allow for the considerable differences among states with respect to many demographic characteristics.

Independent Estimates. In 1965 an independent consulting firm completed a study of Virginia with emphasis on incidence of disability types and needs of the Statewide vocational rehabilitation program.[6] (See Table 4.1.) At that time it was estimated that 491,680 persons in the State suffered from some impairment and of these some 103,330 were actually eligible for services provided by the Department of Vocational Rehabilitation. The report also stated that approximately 36,800 cases would be added to the total disabled each year as a "gross annual" estimate increment for all disability categories. The annual increment for eligible cases was reported to be 15,153. These findings are of interest on two points: (1) the total incidence figure is far below an estimate derived using 44.1 percent (the National Health Survey approximation 44.1 percent times 4,331,000 is equal to 1,909,971) as a reliable estimate of total incidence, and 12.2 percent times 4,331,000 is equal to 528,383 which is still higher than the independent estimate although 12.2 percent represents only those persons *limited* in some way; and (2) the estimate of the eligible disabled is nearly 17,000 cases more than would have been estimated using Rehabilitation Service's Administration's 2.0 percent estimate.

Comparison of Several Estimates. Assuming these estimates of eligible cases are reasonable, the bulk of the Virginia Department of Vocational Rehabilitation caseload (approximately 64.7 percent of the total) would be cases from but two of the ten categories listed—*orthopedic* and *mental retardation* (although second is estimated incidence totals, *cardiac* was reported at only 5,000 for eligible case total). In fact the agency handled clients as categorized in Table 4.2.

Data reported in Table 4.1 were arrived at following calculations based on a State population of 4,331,000, while the findings of the independent consulting firm were transformed into values representative of the more recent population estimate. Several points should be noted:

1. The estimated national incidence of all types and degrees of disability is approximately 44.1 percent of the population: (a) 44.1 percent times 4,331,000 is equal to 1,909,971 (b) 44.1 percent times 4,602,091 is equal to 2,029,522. Using 44.1 percent as a rough approximation of incidence indicates that the estimated totals are extremely low in terms of a national incidence estimate.

2. Approximately 1.9 percent of the national population has been estimated as being disabled to the extent that they *need* and are eligible for vocational rehabilitation services: (a) 1.9 percent times 4,331,000 is equal to 82,330 (b) 1.9 percent times 4,602,091 is equal to 87,440. Data presented in Tables 4.1 and 4.4 for estimated incidences of eligible cases are some 26 percent higher than the values estimated using the respective population figures and the national estimate. The difference between the two estimates is equal to almost 20.3 percent of the estimate of the independent agency.

3. Considerable differences exist between estimates of annual increments within disability categories. The estimated population growth for Virginia from 1963 to 1967 was some 271,000 persons. Included in this value were allowances for birth, deaths, in-migration and out-migration. Gross annual increment is defined in terms of eligibility and feasibility of individual cases, and it reflects the change in numbers of eligible cases from one point to some subsequent point in time. (a) For all disabilities of any consequence, the 1965 estimated gross annual increment was reported by the independent agency as 36,800 (Table 4.1). (b) The same firm estimated the eligible gross

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[3] See Monroe Berkowitz, *Estimating Rehabilitation Needs*. New Brunswick, New Jersey: Bureau of Economic Research, Rutgers—The State University, 1967.

[4] *State Data and State Rankings, loc. cit.*

[5] *Caseload Statistics of State Vocational Rehabilitation Agencies in Fiscal Year 1966.* Washington: Department of Health, Education, and Welfare, Vocational Rehabilitation Administration, Division of Statistics and Studies, 1966.

[6] *Administrative Study of the Virginia Department of Vocational Rehabilitation,* The Final Report of Findings and Recommendations on Phase II. Boston: Harbridge House, Inc., 1965.

annual increment as 15,153. These reported values can be interpreted as follows: in two years it would be expected that the number of disabled in Virginia would (if no services provided a reduced number) rise by some 73,000, and the number of eligible cases would rise by some 30,000 cases. In the four years between 1963 and 1967 the respective increases should have been some 147,200 total cases and some 60,600 cases. A comparison between those increments based on the four-year increase in population seems to indicate a discrepancy between estimates as calculated by the two methods—using the population increase resulted in a much lower estimate for gross annual increment (which is defined as the increment of *new* cases per year). Assuming the gross annual increment to be 15,153 for eligible cases in 1963, then the caseload for 1964 could be estimated at some 103,330 plus 15,153 or 118,483, and for 1967 could be estimated at some 160,000 eligible cases. Several obvious questions arise following careful scrutiny of the assumption in this process: (1) The caseload for each year is assumed to be a constant figure—103,330, and (2) the *growth* is a function only of gross annual increment, which is itself a constant—15,153. If either value changes per year then any subsequent interpretation must first consider this change, and the resulting computations reflect the consideration.

Clearly, since use of the estimated gross annual increment of 15,153 would have resulted in estimating some 3.4 percent of the Virginia population to be in need of and eligible for vocational rehabilitation services in 1967 as opposed to about the 1.9 percent estimated using national population data, some adjusting of the data was in order. An estimate of 160,000 needy and eligible cases would be possible using the 1.9 percent only if the Virginia population where somewhat in excess of *8 million*.

Estimates and Comparisons of Incidence Within Selected Disability Categories

Two formats are used for reporting these data, one format for Statewide distributions, and one format for distributions in the seven Department of Vocational Rehabilitation planning areas. For both presentations incidence is reported by *selected* disability categories. In all reporting aspects data are compared with respect to expected incidence as observed from:

1. Data collected by national agencies and estrapolated to describe Virginia.

TABLE 4.1—Estimated Disability Incidence in Virginia by Selected Disability Categories 1965

	Total cases			*Eligible cases*		
VRA class of disability	*Estimated incidence in Va.*	*Gross annual increment*	*% of total census*	*Estimated incidence in Va.*	*Gross annual increment*	*% of total eligible caseload*
Orthopedic	93,840	9,300	19.1	33,900	3,390	32.8
Visual	24,100	2,400	4.9	3,000	300	2.9
Hearing	15,540	1,500	3.2	5,180	518	5.0
Respiratory & tuberculosis	29,000	3,000	5.9	6,100	1,000	5.9
Mental retardation	128,000	1,900	26.0	33,000	1,200	31.9
Mental illness	60,000	6,000	12.2	8,150	5,075	7.9
Epilepsy	35,000	700	7.1	3,500	70	3.4
Cardiac	100,000	10,000	20.3	5,000	500	4.8
All other	—(a)	—(a)	—(a)	5,000	2,500	4.8
Sub-total	486,680	34,800	99.0	102,830	14,553	99.5
Prisoners in State penal system	5,000	2,000	1.0	500	600	1.0
Total	491,680	36,800	100%	103,330	15,153	100% (b)

(a) These data were not reported.

(b) These data were derived using a 1963 population base of 4,331,000.

Source: *Administrative Study of the Virginia Department of Vocational Rehabilitation, Phase II.* Boston: Harbridge House, Inc., 1965, p. 1a, Exhibit 1.

TABLE 4.2—Reported Department of Vocational Rehabilitation Caseload for Fiscal Year 1967 by Selected Disability Categories

	Status, June 30, 1967				
VRA disability	*Closed not rehabilitated*	*Closed rehabilitated*	*Remaining*	*Total cases*	*% of total*
Visual impairments	343	102	351	796	3.15
Hearing impairments	157	176	349	682	2.70
Orthopedic deformity	1,737	962	2,714	5,413	21.46
Absence or amputation of major member	158	162	354	674	2.66
Mental, psychoneurotic personality	1,045	346	1,965	3,356	13.31
Mental retardation	842	432	2,453	3,727	14.78
Other disabling conditions for which etiology is not known or appropriate					
Neoplasms	128	447	278	853	3.38
Allergies, endocrine, metabolic & nutritional	275	178	521	974	3.86
Diseases of blood, etc.	22	10	47	79	0.30
Disorders of nervous system	220	71	382	673	2.66
Cardiac & Circulatory	604	368	822	1,794	7.11
Respiratory	392	97	343	832	3.29
Digestive system	496	972	1,080	2,548	10.10
Genito-urinary	250	589	582	1,421	5.63
Speech impairment	82	37	215	334	1.32
Disabling diseases	290	226	545	1,061	4.19
Total	7,041	5,175	13,001	25,217	99.9%

2. Known incidence for disability types as recorded in Department of Vocational Rehabilitation case files.

3. Incidence rates as measured by the five surveys conducted for the Governor's Study Commission on Vocational Rehabilitation.

4. Known incidence as recorded during the 1965 school census which was conducted and reported by the Virginia Department of Education.

Population Trends. Incidence of disability by either gross categories or by sub-categories is heavily dependent upon population in general and specifically on population types (race, sex, income levels, size of family, age group, residence, industry of head of family).[7] The data in Table 4.3 have been arranged to depict gross changes in *total population* in the seven Department of Vocational Rehabilitation planning areas of the State.

TABLE 4.2a.—Commission for the Visually Handicapped's Caseload for Fiscal Year 1967

Active Caseload (a)	1,123
Visually handicapped (b)	247
Aid to the Blind (c)	1,137

(a) Commission for the Visually Handicapped is composed of several departments, one of which is the vocational rehabilitation branch of the agency. The total reported indicates only those blind persons who can meet eligibility and feasibility requirements.

(b) Approximately 22 percent of the total caseload.

(c) There is some overlap between categories 1 and 3.

Source: Virginia Commission for the Visually Handicapped, *Annual Report* April 30, 1968.

The Abingdon area is the only planning area in which population decreased between 1966 and 1967. All other areas increased in terms of numbers, although the Roanoke and South Boston areas had relatively small increases. In general, the population of the State is increasing within the seven planning areas about as expected, for the greater gains (Alex-

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[7] *Synthetic State Estimates of Disability*, Derived from the National Health Survey. Washington: U.S. Government Printing Office, Public Health Service Publication No. 1759.

TABLE 4.3—Population by Department of Vocational Rehabilitation Planning Areas, 1940-1967 (a)

Planning areas(b)	*Year*										*Percent of State*	*Avg. 1960-1967*
	1940	*1950*	*1960*	*1961*	*1962*	*1963*	*1964*	*1965*	*1966*	*1967*		
I	399	422	388	386	387	387	386	391	389	387	8.41	387.6
II	318	367	405	411	418	421	430	443	451	452	9.82	428.9
III	308	338	373	379	384	388	395	413	421	428	9.30	397.6
IV	435	446	457	461	465	472	472	483	488	491	10.67	473.6
V	216	396	670	687	711	770	798	829	869	905	19.67	779.9
VI	524	612	717	730	738	760	770	788	808	822	17.87	767.3
VII	486	744	957	984	1,019	1,039	1,057	1,081	1,105	1,116	24.26	1,044.7
State(a)	2,686	3,326	3,967	4,036	4,122	4,237	4,307	4,426	4,531	4,601	100.00	4,278.4

(a) In thousands; the State totals are not exact because of rounding.

(b) Planning areas by name:
I = Abingdon
II = Roanoke
III = Charlottesville
IV = South Boston
V = Alexandria
VI = Richmond
VII = Norfolk

SOURCE: Bureau of Population and Economic Research, University of Virginia, Charlottesville, Virginia.

TABLE 4.4—Total Incidence (of those limited) 1980 Projections by Disability Categories (a)

VRA Class of disability	*Estimated incidence in Virginia*	*Gross annual increment* (c)	*Percent of total incidence* (c)
Orthopedic	130,491	9,300	19.1
Visual	33,467	2,400	4.9
Hearing	21,862	1,500	3.2
Respiratory	40,309	3,000	5.9
Mental retardation	177,632	1,900	26.0
Mental illness	83,350	6,000	12.2
Epilepsy	48,507	700	7.1
Cardiac	138,690	10,000	20.3
All Other	—(d)	—(d)	—(d)
Sub-total	674,518	34,800	99.0
Prisoners in State penal system	8,682	2,000	1.0
Total	683,200(b)	36,800	100.0

(a) All projections in Table 4.4 are based on a projected 1980 population of 5.6 million. (BPER and Metropolitan Studies)

(b) Estimations were calculated by multiplying the projected population by the percent of total caseload which was calculated to be 12.2 percent of the total population of 683,200 persons.

(c) Gross annual increment and percent of total incidence were those figures used in Table 4.1. Assumed were: (1) the national percent remained constant; (2) the percentage reported as portions of the total incidence were reliable; (3) the percent of total incidence would remain constant, i.e. while the number of cases would increase with population increments, the proportions of categories would not deviate from 1965 to 1980.

(d) Not able to project.

Table 4.5—1980 Projections of Eligible Incidence by Disability Categories (a)

VRA Class of disability	*Estimated incidence in Virginia*	*Gross annual increment* (c)	*Percent of total eligible cases* (c)
Orthopedic	34,899	3,390	32.8
Visual	3,086	300	2.9
Hearing	5,320	518	5.0
Respiratory	6,278	1,000	5.9
Mental retardation	33,942	1,200	31.9
Mental illness	8,406	5,075	7.9
Epilepsy	3,618	70	3.4
Cardiac	5,107	500	4.8
All Other	5,107	2,500	4.8
Sub-total	105,763	14,553	99.5
Prisoners in State penal system	637	600	1.0
Total	106,400(b)	15,153	100.0

(a) All projections are based on a projected 1980 population of 5.6 million. (BPER and Metropolitan Studies)

(b) Incidence = projected 1980 population × 1.9 percent or 106,400 persons.

(c) Gross annual increment and percent of eligible cases were those figures used in Table 4.1.

andria, Richmond, Norfolk) occur where industry provides more occupational opportunity for labor. In 1967 the State was estimated to have a total population of 4,601,000 persons, the majority of whom lived in the metropolitan areas of Alexandria, Norfolk and Richmond. Approximately 2,600,000 residents are concentrated along an imaginary line extending through these cities. There is little reason to expect that this population growth pattern will be disturbed in coming years, the only obvious exception being the potential "inland" expansion related to developing inter-state highway routes which could provide impetus for inland industrial projects.

The general population of Virginia is rapidly becoming an urban. It is estimated that by 1980 some 75 percent of the total population will reside within one of ten metropolitan areas of the State (approximately 4.2 million persons of a State population of 5.6 million).[8] It is generally accepted that incidence of disabilities by types is first related to population density and, second, to several other demographic characteristics. Therefore, in general, the best estimate of incidence when speaking only of numbers of disabled persons would be to look for the areas of concentrated population where, in all probability, the highest incidence rates will be found. (Data in Appendix I have been selected and arranged to illustrate the projected growth in ten metropolitan areas. When the national estimates are used to project total incidence and eligible incidence, values based on projected population for 1980 as defined in Tables 4.4 and 4.5. By 1980, 75 percent of the State's population will be urban, the average growth rate for the period 1965-1980 being 2.5 percent for the ten metropolitan areas; for the same period the annual growth for the State is estimated to be 1.7 percent. Over the same interval the projected growth rate for non-urban areas of Virginia is only 0.1 percent annually, out-migration and lower birth rate due to outflow of women of childbearing age being two prime factors. Total State net change for 1960-1985 has been estimated to be 52.9 percent.[9] As the total population of Virginia increases the total incidence of disability categories will also increase, and the major increases will occur in the ten metropolitan areas. In proportion, the relative increase in demands for Department of Vocational Rehabilitation services will follow closely the growing concentration of clients in the ten metropolitan areas and the more slowly growing non-metropolitan population. The preponderance of Department of Vocational Rehabilitation manpower and facilities will need to be concentrated in or near the ten metropolitan areas because the caseload will tend increasingly to be concentrated in those geographic areas.

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[8] John L. Knapp, *Projections of 1980 for Virginia Metropolitan Areas.* Richmond: Division of Planning, October 1967.

[9] *Ibid.*

Variation in Incidence Due to Racial Factors. Several additional factors are thought to be related to incidence. Racial differences may account for considerable variation in incidence. Fein reported:[10]

1. A gap of some forty years separates whites and Negroes with respect to health levels in favor of whites. (Fein estimated blacks in 1960 to be approximately where whites were in 1920.)

2. Negroes do not have the same life expectancy as do white persons. In 1960 the average Negro male, at birth, was expected to live some six years less than a white counterpart.

3. In 1962, the Negro TB rate was 11.5 per 100,000, over twice the white rate of 4.2 per 100,000.

4. On every measure—unemployment, family income, visits to the physician, etc.—Negroes appear to be less fortunate than whites.

Table 4.6 contains data showing white and non-white distributions for the seven Department of Vocational Rehabilitation planning areas. In Virginia, the non-white proportion of the population has fallen steadily. Although the numbers of non-whites have increased, the non-white proportion of the population has decreased, partly due to out-migration.

Table 4.6 contains the findings for Statewide population trends by white and non-white, and by the seven Department of Vocational Rehabilitation planning areas. Assuming a relationship between non-white population and incidence of disability where incidence for these persons is measurably greater than for whites, the following observations are relevant:

1. The non-white proportion of Virginia's population is steadily decreasing, although the number of non-white persons in Virginia is slowly increasing.

2. The most significant population increases (both white and non-white) occurred in planning areas III, V, VI, and VII although all planning areas except I showed considerable increases. In general, these findings support the hypothesis that the migration and subsequent higher incidence of births has and will continue to be in the metropolitan areas of Virginia as defined above. This becomes especially obvious when observing the growth from 1965 to 1966; planning areas IV, V, VI, and VII increased far more than I, II, III.

3. Non-white population in planning areas I, II, III and IV over the 1961-1966 interval either decreased or remained fairly equal (with respect to the earlier figure). The only planning area to show an increase in excess of the State average was Area V (Alexandria) where the 13.5 percent non-white increase surpassed the 12.8 percent for whites.

4. For the one-year period 1965-1966, planning areas I, III, and VII experienced reductions in the proportion of non-whites (although the drop in VII was probably due to extensive urban renewal which significantly reduced the number of available dwelling units in Norfolk, where a loss of some 6,000 non-white persons was reported between 1965 and 1966). However, for the same period the loss of non-white population in planning area VII was only 2,000 and many of those 6,000 persons may have re-established their homes in cities adjacent to Norfolk.

5. During 1965-1966 the most important non-white population gains were evidenced in planning area V. In Alexandria the in-migration of whites and non-whites was approximately equal (4.8 percent in each instance).

6. In coming years the trend toward urbanization of the preponderance of non-whites in Virginia can be expected to continue. If the current incidence figures continue to be applicable then the urban areas of Virginia, most notably in planning areas V, VI, and VII, will add to the already heavy contribution of Department of Vocational Rehabilitation caseload from urban, metropolitan areas.

In general, with no special concern for specific disability categories, relatively higher incidence rates might be anticipated in urban, non-white areas. In particular, areas with rapidly growing populations in which sizable numbers are non-white will experience considerable increases in total caseloads. These increases will be greater than those occurring in predominately white areas.

Generalizations. In the following sections comparisons of several potential sources of incidence data are presented: (1) National population proportions, (2) Department of Vocational Rehabilitation fiscal year 1967 data, (3) Department of Vocational Rehabilitation fiscal year 1968 data, (4) Community data from five surveys, (5) Virginia public school census results, 1965.

Table 4.7 contains a breakdown of the fiscal year 1967 caseload for Department of Vocational Rehabilitation. These data can be compared to the

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[10] Rashi Fein, *An Economic and Social Profile of the Negro American.* Washington: The Brookings Institution. Reprint No. 110, 1966.

TABLE 4.6—White and non-white Population Trends, 1961-1966, by Planning Area
(State totals in thousands)

	Year						*Percent Increase*	*Percent Increase*
Planning area	*1961*	*1962*	*1963*	*1964*	*1965*	*1966*	*1961-66*	*1965-66*
Abingdon								
white	376,498	377,613	377,809	376,540	384,772	380,022	0.011	-0.011
non-white	9,508	9,292	9,205	9,074	8,920	8,970	-0.057	0.005
Roanoke								
white	361,222	367,715	370,778	377,500	389,039	393,517	0.089	0.012
non-white	50,220	50,690	50,673	52,166	53,150	53,166	0.059	0.000
Charlottesville								
white	336,103	341,452	344,270	351,396	368,351	376,686	0.121	0.023
non-white	42,569	42,755	43,415	43,318	45,094	44,677	0.050	-0.009
South Boston								
white	321,529	324,244	330,397	330,870	338,553	350,528	0.090	0.035
non-white	139,266	140,302	141,592	141,472	144,194	144,852	0.040	0.005
Alexandria								
white	631,532	654,973	712,052	740,087	769,007	805,948	0.128	0.048
non-white	55,141	56,101	58,072	58,224	59,702	62,591	0.135	0.048
Richmond								
white	484,097	496,020	510,119	517,212	532,672	550,746	0.138	0.034
non-white	243,044	246,101	250,103	252,770	254,174	257,442	0.059	0.013
Norfolk								
white	710,011	717,193	729,172	741,937	761,545	786,882	0.108	0.033
non-white	300,432	301,699	309,856	314,853	319,464	317,969*	0.058	-0.005*
State								
white	3,200	3,279	3,375	3,436	3,541	3,636		
non-white	836	847	863	872	887	890		
Total	4,036	4,126	4,238	4,308	4,428	4,526		
% white	79.3	79.5	79.6	79.8	80.0	80.3		
% non-white	20.7	20.5	20.4	20.2	20.0	19.7		

* In 1966 extensive urban renewal reduced the number of available dwelling units in Norfolk (by some 6,000 persons as reported for the estimated Norfolk population) and apparently this affected non-white more than white.

Source: B.P.E.R., University of Virginia (Data available only through 1966)

caseload for the first ten months of fiscal year 1968 which appear in Table 4.8. These values can be compared to those in Tables 4.9 and 4.10. Several discrepancies exist in the data depending on which values are used. With a 1968 population estimated to be in excess of 4.6 million persons, and using the national average of 12.2 percent disabled and limited and 1.9 percent in need of and eligible for vocational rehabilitation services, there would appear to be some 571,000 disabled and limited persons in Virginia. Of these 88,926 would be eligible for services of Department of Vocational Rehabilitation. Survey data collected in five communities in Virginia gives reason to conclude that these estimates may be considerably lower than the real proportions of disability categories in the State. First approximations of the actual incidence gross numbers would result in estimating some 850,000 disabled of whom some 130,000 might qualify for vocational rehabilitation services. Information came from national studies of the Patterns of Rehabilitation Services Project which involved the entire staffs of all ninety state vocational rehabilitation agencies. These studies yielded national and state data about 84,699 referred persons who were con-

TABLE 4.7—Department of Vocational Rehabilitation by *Selected* Disability Categories for Fiscal Year 1967 (a)

VRA Class of disability	*Caseload*		*Number per 100,000* (a)	*Incidence in State* (b)
	#	%		
Visual impairments	796	3.2	17	810
Hearing impairments	682	2.7	15	693
Orthopedic deformity	5,412	21.5	118	5,508
Absence or amputation of major and minor members	673	2.7	15	688
Mental, psychoneurotic personality	7,084	28.1	154	7,207
Other disabling conditions	10,568	41.9	230	10,750
Total	25,215	100.1		

(a) Based on the 1967 population of 4,602,091.

(b) Based on a 1968 population of 4,680,327.

Source: These data were supplied by the Virginia Department of Vocational Rehabilitation.

sidered for case services, and the more than 2,500 professional persons who did the evaluations.[11] Data reported by Dishart were collected from the ninety national agencies during the interval January 1-March 31, 1964.

For the nation, two categories contribute almost one-half of the total vocational rehabilitation caseload—"orthopedic deformities" and "other disabling conditions." Mental retardation accounts for 7.1 percent of the national caseload; psychosis and neurosis account for 11 percent nationally, but is only 5.9 percent for Department of Vocational Rehabilitation.

Generally, the fiscal year 1967 Department of

TABLE 4.8—DVR Caseload for Fiscal Year 1968, by Selected Disability Categories

VRA Class of disability	*Caseload*		*Number per 100,000* (a)
	#	%	
Visual impairment	881	2.72	18
Hearing impairment	900	2.78	19
Orthopedic deformity	6,253	19.32	134
Absence or amputation of major and minor members	718	2.21	15
Mental, psychoneurotic personality	10,838	33.49	232
Other disabling conditions	12,764	39.45	273
Total	32,354	100.0	

(a) The 1968 population was estimated as 1.7 percent plus the 1967 population or 4,680,327 persons.

Source: Virginia Department of Vocational Rehabilitation.

TABLE 4.9—Results of Incidence Surveys in Five Virginia Communities (a)

VRA Class of disability	*Disabilities reported in five communities*		*Percent of Total*	*Number per 100,000* (c)	*State Estimates 1968* (c)
Visual impairment	98	8.7	2.3	2,340	107,648
Hearing impairment	95	8.4	2.2	2,238	102,967
Orthopedic deformity	328	29.1	7.7	7,834	360,385
Absence or amputation of major and minor members	21	1.9	0.5	509	23,401
Mental, psychoneurotic personality	95	8.4	2.2	2,238	102,967
Other disabling conditions	490	43.5	11.5	11,701	538,238
Total	1,127	100.0	26.4(b)		1,235,606

(a) N = 4,261 persons; mentally retarded persons were not included in this portion of the analysis ("500" category cases are the totals *without* mental retardation incidence.)

(b) The sample of 4,261 persons were obtained from 1,291 families.

(c) Based on the estimated 1968 population of 4,680,327 persons.

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[11] Martin Dishart. *A National Study of 84,699 Applicants for Services from State Vocational Rehabilitation Agencies in the United States.* Washington: Patterns of Services in Divisions of Vocational Rehabilitation, 1964.

TABLE 4.10—Incidence of Disabilities Among Pre- and School-Age Children in Virginia

Disability Class	*Reported Disabilities* (a)		*Percent of N*	*Incidence in State*
	#	%		
Blind	455	2.6	0.029	1,357
Deaf	632	3.6	0.041	1,919
Physically handicapped	7,830	44.1	0.504	23,589
Mentally retarded	7,389	41.6	0.476	22,278
Emotionally disturbed	1,464	8.2	0.094	4,399
Total	17,770	100.1	1.144	53,542

(a) A total of 1,552,833 children from age 1 to 19 were reported by the census takers. Several cities and counties failed to file their reports with the Bureau of Educational Research, Richmond, and were unavailable to be included in these totals. Parents reported the incidence to census takers.

Source: Virginia State Department of Education's 1965 School Census.

Vocational Rehabilitation caseload in Virginia *did not* approximate the findings for a national report using 84,699 similar cases. Referrals in the national study tend to cluster at different points from those in Virginia.

The two primary reasons for denial of services are "Handicap too severe," for and "Didn't respond or appear."[12] Obviously, the one-fifth of the 39,253 clients who failed to pursue the issue cannot be classified as "denied" service. However, they constitute a significant portion of the total. It seems reasonable to conclude that, in any evaluation using estimated incidence values, care must be taken to identify some sizeable element that will not pass any further than the referral stage, because they will decline services for one reason or another. It also seems reasonable to conclude that there are many other persons who will never come into the referral process for the same reasons that the 20 percent failed to continue through the rehabilitation process. In fact, the number of needy, eligible, and feasible potential clients could be far in excess of current estimates because of individuals who will never come into contact with the agency simply because they prefer not to. If 20 percent is a reliable figure, then a significant portion of Virginia's eligible clientele will continue to refuse services—these persons obviously will require some "new" approach if they are to accept services. Data in Table 4.11 compares the caseload for Department of Vocational Rehabilitation fiscal year 1967 and the national findings for January 1, 1964, through March 31, 1964. Of major importance are the relative percentages in individual categories.

Dishart's Study of National Rehabilitation Patterns. In May and June of 1965, four National Institutes were conducted in an effort to bring new rehabilitation information to program administrators who could determine how it might best be applied and who would be in positions high enough to do so.

The main purpose behind structuring Table 4.11 was to establish the relationship between the types of cases being referred to Virginia's rehabilitation agency and the types of cases being referred to the nation's rehabilitation agencies. In many cases it would seem reasonable to conclude that the State office is contacting about the same proportion of clients as are agencies across the nation. In some instances, however, the relationship is not as clearly defined; e.g., visual, amputations, psychosis and neurosis, and mental retardation. Various explanations clarify the differences (with respect to the above categories) in Table 4.11, although it could be guessed that in most states the differences might be as extreme as those observed in Virginia. The effect is compensated for by the numbers involved in structuring the national averages. Perhaps the referral system in Virginia is able to operate effectively only on some specific levels—school units seem to be better able to recognize, diagnose, and refer eligible cases than is being done where these sources (school unit type) do not exist. Because of the differences in the national and in the Virginia caseloads, it seems unwise to use either system of reporting for the major portion of any estimation of incidence or prevalence. Any valid estimation of incidence probably involves some system of calculation that is not dependent upon existing values. To attempt estimation by securing data from only those persons who have been through the referral process

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[12] *Op. cit.*

TABLE 4.11—Comparison of Department of Vocational Rehabilitation Referrals in Fiscal Year 1967, and 84,699 Referral Cases Reported by Dishart

Major Disabling Condition	*Department of Vocational Rehabilitation Fiscal Year 1967*		*Reported by Dishart*	
	#	%	#	%
Visual	796	3.1	7,791	9.2
Hearing	682	2.7	4,285	5.1
Orthopedic	5,412	21.3	19,852	23.4
Absence or Amputations	673	2.6	3,537	4.2
Psychosis and Neurosis	1,500	5.9	9,293	11.0
Other Personality Disorders	1,856	7.3	4,191	4.9
Mentally Retarded	3,728	14.7	5,993	7.1
Cardiac	1,793	7.0	5,652	6.7
Epilepsy	673	2.6	1,855	2.2
T.B. (pulmonary)	832	3.3	2,805	3.3
Hernia	—(a)	—(a)	1,711	2.0
Other Disabling Conditions	7,270(b)	28.6	19,927	20.0
Not Reported	226	0.9	807	0.1
Total	25,441	100	84,699	99.2

(a) Data not available for easy access. Department of Vocational Rehabilitation Fiscal Year 1967 report listed some 2,549 referrals with disabilities of "66" status (digestive system).

(b) Total referrals minus all except hernia, all these being "other."

Source: Virginia Department of Vocational Rehabilitation and Dishart, *Vital Issues and Recommendations from the 1965 National Institutes for Rehabilitation Research.*

would result in some disability categories being over-estimated and some other disability categories being under-estimated. *In fact, the only reliable procedure valid for incidence estimation purposes is an actual "head count."* In this procedure those persons with significant chronic conditions (conditions limiting these persons in their major activity) and who are eligible for the program in *individual* states are identified.

This type of data was available from surveys which the research staff of the Governor's Study Commission on Vocational Rehabilitation conducted in five Virginia communities. These surveys yielded information relative to the general health problems of more than four thousand residents. (See Table 4.12.) The data represent a cross-section of the population and are of the type appearing to be the most reliable data to use for estimating *both* specific disability categories *and* the extent of limitations.

Community Survey Data in Virginia. The survey data were collected from five communities in Virginia during the period August 1967 through January 1968. Included in the survey were: Augusta County, Petersburg, Norfolk, Alexandria, and Wise County. (The order is that in which the surveys were implemented.) Area probability sampling techniques provided a representative sample of families and adults in five communities with whom complete interviews were conducted. From these families, 4,261 persons' data were recorded.

Each person residing in the specified household—dwelling unit (DU)—was included in the reporting from the DU (if not a transient, a boarder, etc.). Only data on family members within a given household including blood relatives were analyzed.

Table 4.13 contains data which represent the general breakdown of reported disabilities from the survey information. The orthopedic disabilities and "other" disabilities account for most of the reported incidence of disability. Little can be said concerning incidence of some minor categories within these major divisions, but it is of relatively little importance what the cause might be for the real importance of these data are to identify those needing services, those disabled but not needing services, and the total of these two groups. Since 29.1 percent of the reported disabilities are orthopedic in nature and 43.5 percent of the disabilities are in the "600 category," it is obvious that the preponderance of planning for future manpower and facility needs will be greatly dependent upon the exact definition of the estimated extent of these incidence values. However, the major question is not the value representative of the total number of disabled persons, but, rather, the number which represents the eligible and needy persons in the State. Table 4.14 is an attempt to define the extent of limitation that is evident in the community survey data. Persons interviewed were asked to identify disabilities as precisely as possible and to then state how this disability restricted work and other activities.

Table 4.14 reveals that most of the disabilities reported are of the "not limiting" type, and that the general number of types one, two, and three limitations are within the same domain. It should be understood clearly at this point that the nature of the disability cannot be completely ascertained from the design used to determine extent of limitation, for the magnitude of the disability is not reflected precisely with extent of limitation. For example, a person might have a problem that could be evaluated in terms of a "300 category" disability—orthopedic—and could be reported as being totally unable to work. But this might be a condition where spontaneous restoration would be likely. The person could continue to function without any permanent withdrawal of work ability or capacity in the future. Some 274 persons contacted in the process of the study were limited to the extent that they felt that the reported disability interfered with their normal daily activities (i.e. all except "Not limited in any way"). Of the 1,328 persons reporting some limitation (categories one, two, and three), 20.6 percent thought themselves to be limited to some extent. Those with a disability but not thought to be limited accounted for 79.4 percent of the total number reported to suffer from *any* disabling condition. These figures are for persons of all ages.

TABLE 4.12—Distribution of Data From The Five Community Surveys of Disabilities in Virginia

1. Total number of families	1,291
2. Total number of persons	4,261
3. Average number of persons per family	3.3
4. Possible number of disabilities that could have been reported	59,654(a)
5. Incidence of "no disability"	58,414(b)
6. Number of disabilities that were possible to report	1,240(c)
7 Cases where the disability was too difficult to categorize (NEC)	113(d)
8. Number of disabilities included in subsequent analyses	1,127
9. General definition by disability code:	
a. No disability reported	58,414
b. Visual (100s)	98
c. Hearing (200s)	95
d. Orthopedic (300s)	328
e. Absence or Amputation (400s)	21
f. Mental illness (500s without mental retardation)	95
g. Other disabling conditions NEC (600s)	490
h. Total disabilities, all types reported	1,127
i. Disability indicated, not reported	113
j. Total, all possibilities	1,240

(a) Fourteen categories were available for each person—14 × 4,261 = 59,654.

(b) These cases were thus classified when either no disability was reported or the disability was so slight that no limitation was indicated. Or, the limitation was significant but the disability description given to the interviewer was not sufficient for coding purposes and was omitted.

(c) Item 4 minus item 5.

(d) Not easily classified.

It is important to note that some 274 persons (20.6 percent) of the 1,328 who were included in the disability group reported being limited in some extent and 163 or 12.2 percent were limited with respect to their ability to work. These findings were derived from the individual category reported in Table 4.14, the criterion being a disability severe enough to involve limitation at either the "one" or "two" level. Also, 8.1 percent were severely limited, 4.1 percent were somewhat limited, and 8.3 percent slightly limited. For the latter group, those who reported that they were ". . . able to go outside alone, but has trouble in getting around freely," the degree of limitation intended is questionable.

A second part of the health interview segment of the community questionnaire attempted to resolve the question of the extent of limitation by another procedure where respondents were asked:

1. "Is there anyone in your family who is seventeen years of age and over?"
   a. "Not able to work at all at present?"
   b. "Able to work but limited in kind or amount of work?"
   c. "Able to work but limited in kind or amount of other activities?"
   d. "Not limited in any of these ways?"

2. "Is there anyone in your family who is a housewife?"
   a. "Not able to keep house at present?"
   b. "Able to keep house but limited in kind and amount of housework?"

TABLE 4.13—Grouped Data to Represent Major Rehabilitation Services Administration Categories; Community Survey Data (all Disabilities) (a)

VRA Class of disabilities	*Inclusive code number*	*Incidence*	*Percent of Total Reported*
Visual impairments			
blindness, both eyes	100 to 119	8	0.71
blindness, one eye	120 to 139	13	1.16
other	140 to 149	75	6.70
N.E.C.(b)		2	
Total(d)	100 to 149	98	8.69
Hearing impairments			
deafness, unable to talk	200 to 209	5	0.44
deafness, able to talk	210 to 219	15	1.34
other	220 to 229	74	6.61
N.E.C.(b)		1	
Total(d)	200 to 229	95	8.42
Orthopedic deformity (except amputations)			
impairment involving three or more limbs	300 to 319	33	2.95
impairment involving one upper and one lower limb	320 to 339	9	0.80
impairment involving one or both upper limbs	340 to 359	34	3.04
impairment involving one or both lower limbs	360 to 379	59	5.27
other	380 to 399	192	17.17
N.E.C.(b)		1	
Total(d)	300 to 399	328	29.10
Absence or amputation of major and minor members			
loss of at least one upper and one lower major extremity	400 to 409	1	0.001
loss of both major upper extremities	410 to 419	0	0.00
loss of one or both major upper extremities	430 to 439	1	0.01
loss of one major upper extremity	420 to 429	3	0.30
other	440 to 449	13	1.20
N.E.C.(b)		3	
Total(d)	400 to 449	21	1.87
Mental, psychoneurotic and personality disorders			
psychotic disorders	500 to 509	27	2.41
psychoneurotic disorders	510 to 519	37	3.30
alcoholic	520	14	1.25
other	522	6	0.53
mental retardation, extent not known	539	9	0.80
N.E.C.(b)		2	
Total(d)	500 to 539	95	8.42

TABLE 4.13—Grouped Data to Represent Major Rehabilitation Services Administration Categories; Community Survey Data (all Disabilities) (a) (continued)

VRA Class of disabilities	*Inclusive code number*	*Incidence*	*Percent of Total Reported*
Other disabling conditions			
neoplasms	600 to 609	4	0.35
allergic, endocrine, metabolic nutritional	610 to 619	54	4.83
all endocrine diseases of blood	620 to 629	0	0.00
epilepsy	630	9	0.80
other disabilities of nervous system	639	9	0.80
cardiac and circulatory	640 to 649	159	14.22
respiratory	650 to 659	61	5.45
digestive	660 to 669	119	10.64
genito-urinary	670	7	0.62
speech	680 to 689	34	3.04
other	690 to 699	34	3.04
Total	600 to 699	490	43.47
Grand Total (c)		1,127(c)	

(a) This data delimits all reported disabilities from the five surveys. No accounting is included to infer eligibility, feasibility or extent of limitations. These considerations are given detailed presentation later, in the report.

(b) Not easily classified. Persons who coded the data listed a non existent VRA code. The general category is correct, i.e., 500, 300, etc.

(c) 1,118 plus nine cases not easily classifiable equals 1,127.

(d) Percentages for the sub-totals derived by using 1,127. Percentages for other categories derived using 1,118.

  c. "Able to keep house but limited in kind and amount of other activities?"
  d. "Not limited in any of the above ways?"

3. "Is there any child in the family, six to sixteen years of age who is:"
   a. "Not able to go to school at all at the present time?"
   b. "Able to go to school but limited in the types of school he can attend?"
   c. "Able to go to school but misses school a great deal?"
   d. "Able to go to school but limited in other activities?"
   e. "Not limited in any of the above ways?"

If the response indicated that some family member was limited in one of these three categories, the respondent was asked to give a complete description of the problem.

Many of the reported disabilities are of minor importance. The total number of limitations reported is only 193, if (1) only those in categories one and two are counted (assuming 100 percent of the housewives were older than sixteen years) and (2) only the limitations that are actually inhibiting activity in some respect are used. In the sample, 4,068 persons were not limited, and of these over 1,100 persons were reported to have a disability that did not restrict activity. Of the sample 4.5 percent were disabled to the extent that they felt their activity was limited. The remainder of those who were disabled did not think of themselves as being limited. (Children less than six years of age were excluded.) This means that of the 1,328 reported limitations in the first example where the disability was identified and extent of limitation was determined, only 14.5 percent were limited enough to consider themselves deprived of activity to some extent. (The 12.2 percent limited, reported earlier, and the 14.5 percent limited, just derived, should be compared with caution due to the different questions used to secure the information, although the values are close enough to justify the conclusion that similar information was obtained in both instances.) A rough approximation would be to estimate potential vocational rehabilitation clients at 14.5 percent of the estimated incidence of disability, age not being a criterion. Another estimate would be to project 4.5 percent of the total popula-

TABLE 4.14—Activity Limitations Due to Selected Disabilities, Community Survey Data, 4,261 Persons in Five Communities(a)

	Extent of Limitation						
Question	*1*	*2*	*3*	*4*	*5*	*Not Reported* (b)	*Total*
"Does any member of your family have:							
trouble seeing?"	6	9	6	93	4,132	15	4,261
trouble hearing?"	10	4	6	94	4,112	35	4,261
permanent stiffness or deformity of the body?"	12	13	23	104	4,072	37	4,261
back or spine trouble?"	8	4	20	128	4,057	44	4,261
paralysis of any kind?"	10	7	12	41	4,170	21	4,261
a missing arm, foot, leg, fingers, or toes?"	2	0	0	31	4,221	7	4,261
epilepsy?"	2	2	1	17	4,232	7	4,261
heart condition?"	19	6	21	153	4,026	36	4,261
tuberculosis or trouble breathing?"	12	2	8	72	4,141	26	4,261
speech defect?"	4	2	2	33	4,198	22	4,261
stomach trouble?"	7	2	2	124	4,089	37	4,261
an alcoholic problem?"	2	0	0	19	4,221	19	4,261
mental problems?"	6	1	1	67	4,165	21	4,261
a condition present since birth or anything else wrong with him that we have not asked about?"	8	3	9	78	4,131	32	4,261
Total(c)	108	55	111	1,054	57,967	359	59,654

(a) All persons interviewed, all ages.

(b) Interviewers, at times, were unable to ascertain the extent of limitation or failed to record the value. These instances were listed under this general category.

(c) Two hundred and seventy-four or 20.6 percent of the total disabled were limited to some extent. One hundred and sixty-three or 12.2 percent of the total disabled were limited with respect to work capacity.

tion as eligible for vocational rehabilitation services, age not a criterion. Table 4.15 contains estimates for total and eligible disabled persons based on national figures and the derived values as shown above. As noted earlier, it has been shown that approximately 12.2 percent of the population are disabled to some extent and that 1.9 percent of the population are disabled, needy, and eligible for vocational rehabilitation services. Also, recall that there were 1,127 known disabilities reported and 1,328 limitations reported from the community survey data. Of the sample 26.4 percent were disabled and 31.2 percent of the sample were limited enough to consider themselves restricted. Of the reported disabilities 14.5 percent were included in the 4.5 percent value.

It should be noted that the values of Table 4.15 were calculated using several sets of different data. First, the total estimated disabled was derived by using the reported number of disabilities from Part I of our health survey. The total was 1,127 cases of all types of disabilities. Of the total sample of 4,261 persons, this meant that 26.4 percent had some disability. Second, the number of limitations exceeded the number of reported disabilities due to reporting problems. Had the total number of reported limitations associated with Part I of the community health survey been used, the total would have been considerably higher. Third, in order to estimate the incidence of eligible disabled persons in the State, some minimum estimate of those disabled was needed. To calculate this value, the number of limitations reported where the person obviously was in need of help was used. Of the 1,328 limitations 193 were evaluated and found to be seriously limited in activity; this resulted in the statement that 4.5 percent of the 4,261 persons in the sample were limited enough to require and be eligible for vocational rehabilitation services in 1968. However, several important considerations need further amplification before acceptable incidence estimates can be derived. An estimation of 4.5 percent needy, eligible persons would result in a figure far too high, since this evaluation would include many persons below minimum age and above maximum age (the incidence figure rises rapidly as age increases until, at age sixty-five, the prevalence of most categories of disabilities has grown to several times the value obtained at age twenty-five). Multiple disabilities also must be accounted for, and the combination of these two sources of error would prohibit usage of any estimation values so derived. In Table 4.16 the population values for seven areas of the State have been adjusted to provide 1967 estimates of numbers of age-eligible persons for whom both the national and study-derived values have been applied. Table 4.17 shows similar estimates for 1968.

Age-grouped Categories, Extent of Limitation. The prevalence of disabling conditions increases with age so that the highest incidence rates occur in the highest age brackets.[13] Also, older persons who suffer from a chronic condition tend to have more than one condition. Older persons tend to have chronic conditions aggregated around impairments associated with the aging process. Table 4.18 contains extent-of-limitation data derived from the second section of the community health interview. Data in this table are of the form:

1. "...is not able to work at all..."
2. "...limited work, kind and amount..."
3. "...able to work, limited in kind or amount of other activities..."

For those from six to sixteen years the fourth category is also appropriate as defined earlier. In each instance the extent of limitation is roughly equivalent to possible eligibility status; i.e. if the number assigned is one or two, the person might well qualify for vocational rehabilitation services (age being a second consideration). Table 4.18 makes the relationship between age and prevalence of disabilities clearer. (A condensation of Table 4.18 appears in Table 4.19, where the relationship in question is given careful examination.)

From these tables it is evident that those persons in age-group fifty-six to sixty-four have a much higher incidence of severe disabilities than any of the other groups. It can be concluded that the sample did contain elements from the older age group where

TABLE 4.15—Estimates of Total and Vocational Rehabilitation Eligible Persons Based on the Estimated 1968 Virginia Population of 4,680,327 Persons

	Total disabled		*Eligible disabled (all ages)*		
	Base-national value (a)	*Base-derived value* (b)	*Base-national value* (a)	*Base-derived value* (b)	*Base-derived value* (e)
Number	566,320	1,235,606	88,926	210,615	105,308
Percent	12.2	26.4(c)	1.9	4.5(d)	

(a) These values were those reported by national study groups discussed earlier. (22.2 million disabled; 3.7 million eligible)

(b) Results from surveying five Virginia communities. Eligible values of 179,163 would have resulted if 14.5 percent of the total disabled had been used. The difference between 210,615 and 179,163 is due to the methodology used to obtain 4.5 percent and 14.5 percent values; one, 4.5 percent, was derived using reported disabilities only, the other, 14.5 percent, was obtained using extent of limitations. *Both values are subject to some question, and it is likely that the true value lies somewhere between the two.*

(c) This value was derived using 1,127 disabled persons. Had the higher figure of 31.2 percent been used (based on reported limitations) the resultant would have been correspondingly higher.

(d) This value does not consider multiple disabilities. The percent was derived using only the rate of severely limited persons from the five community surveys and applying the incidence figure and total sample size.

(e) It has been estimated that persons reporting chronic conditions average 2.0 conditions. 210,615/2 equals 105,308 (a value adjusted for multiple disabilities). Source: *Chronic Conditions and Activity Limitation,* U.S.H.E.W., Washington: National Center for Health Statistics, Series 10, #17, 1965.

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[13] *Chronic Conditions and Activity Limitation,* p. 16.

incidence would be the highest, and that the relationship between age and incidence exists.

For *practical* applications it is advisable to define age-eligible, severely disabled persons as those from which the agency will most likely draw their clientele. Many additional factors govern the definition of eligibility, but perhaps the most important factors are money and extent of limitation and age. Age and extent of limitation should be treated as one factor since the difficult cases for younger clients can be accepted while the same cases for those near the upper limit of age eligibility cannot feasibly enter the process.

Given the above considerations, the data was analyzed for extent of limitation by several age groups as shown in Table 4.19. Overlapping categories are shown to provide bases for additional pertinent comparisons. The age-group sixteen to sixty-four has been

TABLE 4.16—Various Estimates of General Disabilities Incidence by Department of Vocational Rehabilitation Planning Areas, by Total Cases, and by Eligible Cases, 1967

Planning area (b)	*Total cases* (c)			*Eligible cases* (a)	
	National estimate (d)		*Survey estimate* (d)	*National estimate* (d)	*Survey estimate* (d)
	(x44.1%)	*(x12.2%)*	*(x26.4%)*	*(x1.9%)*	*(x4.5%)*
Abingdon	170,817	47,255	102,258	7,359	17,430
Roanoke	199,372	55,155	119,352	8,590	20,344
Charlottesville	189,088	52,310	113,196	8,147	19,295
South Boston	216,603	59,922	129,667	9,332	22,102
Alexandria	398,923	110,360	238,811	17,187	40,706
Richmond	362,540	100,294	217,031	15,620	36,994
Norfolk	492,178	136,158	294,637	21,204	50,222
State	2,029,522	561,455	1,214,952	87,440	207,094

(a) Eligible, age excluded.

(b) Planning area populations were: (1) Abingdon, 387,340; (2) Roanoke, 452,091; (3) Charlottesville, 428,772; (4) South Boston, 491,164; (5) Alexandria, 904,588; (6) Richmond, 822,086; (7) Norfolk, 1,116,505 for a State total of 4,602,091.

(c) Gross incidence estimation (not adjusted for multiple disabilities) based on total population.

(d) Percents multiplied by the population within planning areas yield the estimate.

TABLE 4.17—Various Estimates of General Disability Incidence for an Age-Adjusted 1968 Population

Planning area	*Age-adjusted 1968 population* (a)	*survey estimates*			
		Total disabled (12.2%) (b)	*Total eligible (1.9%)* (b)	*Total disabled (26.4%)* (c)	*Total eligible (4.5%)* (c)
Abingdon	228,488	27,875	4,341	60,321	10,282
Roanoke	266,671	32,534	5,067	70,401	12,001
Charlottesville	252,302	30,780	4,793	66,608	11,353
South Boston	289,718	35,346	5,505	76,485	13,037
Alexandria	533,580	65,097	10,138	140,865	24,011
Richmond	484,915	59,160	9,213	128,017	21,821
Norfolk	658,313	80,314	12,508	173,795	29,624
State	2,713,987	331,106	51,566	716,472	122,129

(a) 42% are not eligible due to age.

Source: Bureau of Population and Economic Research, University of Virginia.

(b) Based on the total estimated age-eligible population, this value is for those limited in some way.

(c) Based on the estimated age-eligible population.

shown to have 2,488 elements as defined above. Of these persons, eighty-eight extremely serious limitations were reported in the first two categories. These people might be considered eligible on two counts; (1) they fall into an age category where Department of Vocational Rehabilitation is most able to deal effectively with them (the school units picking up the younger cases and the mental and correctional units reaching many of those clients at the upper end of the age spectrum), and (2) the extent of limitation is such that the person is quite likely in need of some rehabilitation services. Also, persons in this age-group are currently within the context of the federal definition of eligible persons—those anticipated to attain skills and having a desire to work. When the age-group sixteen to sixty-four is examined, using the first two types of limitations, we see that 3.53 percent of the population (within the age limits) is severely disabled. Conversion of this ratio into an estimate of all categories of eligible persons shows that over 96,000 persons in Virginia during 1968 could have been considered as referrals. This estimate was derived using:

1. Estimated 1967 population = 4,602,091

2. Estimated 1968 population = 1.7 percent times 1967 populations = 4,680,327

3. 58 percent of the population was estimated to be either below sixteen or above sixty-four years. (Eligible by age for 1968 = 58 percent times 1968 population = 2,714,589.)

4. Number of eligible severely disabled for 1968 is the product of the percent estimated as being severely disabled within the age-group and the estimated number of persons in the population defined as sixteen to sixty-four years, or 3.5 percent times 2,714,589 equals 96,096.

The same procedure was used to estimate the number of persons who would be eligible should the first three categories be used for estimation purposes. Using this estimate the number of eligible persons was calculated to be 103,677 for 1968 (3.82 percent). It should be recalled that the national estimate of Department of Vocational Rehabilitation eligible persons was about 88,000 (1.9 percent times the State

TABLE 4.18—Age Groups and Extent of Limitation

		***Extent of Limitation* (a)**										
Age Group	***Number***	***Question 15* (b)**			***Question 16* (c)**			***Question 17* (d)**				***Total***
		1	*2*	*3*	*1*	*2*	*3*	*1*	*2*	*3*	*4*	
12-15	349	0	0	0	0	0	0	1	2	1	13	17
14-15	171	0	0	0	0	0	0	1	2	0	9	12
16-20	371	6	3	1	0	0	0	2	0	0	2	14
21-55	1812	44	10	4	0	0	0	0	0	0	0	58
16-64	2488	69	17	6	0	0	1	2	0	0	2	97
56-64	305	19	4	1	0	0	1	0	0	0	0	25
Age Group					***Extent of Limitation* (e)**							
12-15	349	0	0	0	0	0	0	1	2	1	14	18
14-15	171	0	0	0	0	0	0	1	2	0	9	12
16-20	371	6	3	1	0	0	0	2	0	0	2	14
21-55	1812	44	10	4	9	11	8	1	0	0	0	87
16-64	2488	69	17	6	9	19	11	3	0	0	2	136
56-64	305	19	4	1	0	8	3	0	0	0	0	35

(a) These limitations include only those where any sample point is represented but once. Therefore, if a housewife, by age, is in the first group she will not be counted in the second, "HOUSEWIFE."

(b) Question 15 "Is there anyone in your family who is 17 years of age or over."

(c) Question 16 "Is there anyone in your family who is a housewife."

(d) Question 17 "Is there any child in the family 6-16 years of age."

(e) Elements in this table are *not* mutually exclusive; i.e. if the interviewer asked the housewife to respond to questions 15 and 16, then the response appears in both categories. The purpose of the second table is simply to identify those persons in category 1 who also could satisfy category 2.

Source: Community Survey Data, 1967

TABLE 4.19—Age Groups and Incidence of Disabilities(Condensed from Table 4.18

Age Group	*Number*	*Extent of Limitation* (a)								
		1		*2*		*3*		*4*		*Total*
		#	% (b)	#	% (b)	#	% (b)	#	% (b)	
12-15	349	1	5.9	2	11.8	1	5.9	13	76.5	17
14-15	171	1	8.3	2	16.7	0	0.0	9	75.0	12
16-20	371	8	57.1	3	21.4	1	7.1	2	14.3	14
21-55	1812	44	75.9	10	17.2	4	6.9	0	0.0	58
16-64	2488	71	73.2	17	17.5	7	7.2	2	2.1	97
56-64	305	19	76.0	4	16.0	2	8.0	0	0.0	25

Age Group (c)	*Number*	*Extent of Limitation*									
		1		*2*		*3*		*4*		*Total*	
		#	% (d)	#	% (d)	#	% (d)	#	% (d)	#	%
12-15	347	1	0.3	2	0.6	1	0.3	13	3.7	17	4.9
16-20	371	8	2.2	3	0.8	1	0.3	2	0.5	14	3.8
21-55	1812	44	2.4	10	0.6	4	0.2	0	0.0	58	3.2
56-64	305	19	6.2	4	1.3	2	0.7	0	0.0	25	8.2
Total (e)	2835	72	2.5	19	0.7	8	0.3	15	0.5	114	4.0

(a) Limitations other than "not limited in any way."

(b) Percentage of the total disabled for that group.

(c) Mutually exclusive, 12 to 64 years.

(d) Percentage of the number for that group.

(e) Total disabilities, categories 1 and 2 = 88.0 percent severely disabled = 88/2488 = 3.53 (Of the population of 2488 persons between 16 and 64, 3.53 percent might be eligible for VR services. If the first three categories for those 16-64 years are used the percentage becomes the ratio 95/2488 or 3.82 percent. Also, if the age group is expanded to include those from 12 to 15 the numbers for the two types of classification become 91 and 99 respectively and the percentages are 3.20 and 3.49.)

SOURCE: Community Survey Data, 1967

population). Hence, the actual number of eligible persons for 1968 was probably somewhere between 96,000 and 103,000. Of course, some of those severely limited persons in the first category of extent of limitation would be far too severely limited for the agency to attempt rehabilitation.

The values reported for the estimated 1968 incidence in all categories, by major categories, by race, by community, or by almost any combination of the above variables, are probably below the actual values, perhaps by some significant number because of underreporting. But, in any case, they are below the estimate that would represent the exact proportion of disabled persons. In fact, the best estimate of disability incidence would be that value reflecting the changing eligibility requirements, for the changing definition of eligibility, both in terms of age and extent of limitation, especially when funds for extensive evaluation and treatment vary, affects the relevance of given estimates. These three assumptions could be met: (1) if the actual expense were of no concern; (2) if it could be assumed that the vocational rehabilitation service was a feasible process for any client; and (3) if the agency could come in contact with and convince all disabled persons to accept the services offered. The number of eligible persons could then be expected to rise to some value approximating the incidence figure for disabilities, with only the most minor disabilities excepted. The reason for this is that the incidence value for total incidence as calculated by any method results in a sizable proportion of the Virginia population who cannot function at maximum level. The number of these persons with some disability (estimated previously at between 890,000 and 1,123,000) who would be eligible under the above-defined assumptions is subject to some widely varying estimates, but it surely would be in excess of the stated values for eligible persons of either 96,000 or 103,000. Both of these values are probably low estimates of eligible persons in Virginia for 1968.

Estimates and Projections

Estimation and prediction methodology used in this section is based on the assumptions underlying tabular data as presented in earlier sections. Various estimates are offered as minimum and maximum values for incidence of disabilities by selected categories.

Five Community Incidence Values. Considerable attention has been given the question of total and eligible incidence of selected disability categories. However, a fundamental problem was to evaluate selected areas of the State with respect to the incidence of disability types. It was supposed that certain disabilities would be more in evidence in certain areas of the State due to the population in general, the racial differences in the composition of selected areas, the economic differences, the urban-rural categorization, etc. Areas selected were examined to identify the contributions to selected categories for each area and the results appear first in Table 4.20.

In each example the percent of incidence was found using the total number for that particular survey. While 199 persons of 861 questioned in Augusta County reported some disability, only ten, or 1.2 percent of the 861 persons reported visual disabilities. And, 1.6 percent reported hearing difficulties, 4.2 percent reported some type of "500" disability, etc. Of special interest are the relative contributions made within individual disability categories by each of the five areas. For example, in Augusta County some 1.2 percent of the population suffer from some type of visual impairment while in Wise County visual problems accounted for 3.9 percent of reported disabilities. These values are independent of the total number of persons used within individual areas, for once converted into percent values the emphasis is placed on that proportion of population so afflicted, not the total number of people; therefore, the use of percents makes possible comparison of areas with respect to relative contributions. Data in Table 4.20 were calculated using all persons involved in the total sampling procedure, where no estimate of eligible persons is attempted. The result is an estimated value for all those persons who are impaired whether limited in activity or not. This process produces an estimate of *total* incidence for given populations.

Two values are needed for any incidence estimations, one value which is representative of total incidence, and another value for those who might be eligible for rehabilitation services. Severity of limitation is an ancillary question associated with both estimates. Table 4.20 was designed to provide only that information of the first type—total incidence values for the five areas surveyed.

Relative Incidence for Five Communities. Table 4.20 can be used to equate the various contributions to total incidence from the surveyed areas, and indicates for example, that the ratios for Augusta County and Wise County are far different in many of the reported categories. Visual disabilities are 1.2 percent of the total area incidence for Augusta County, 3.9 percent for Wise County, and 2.3 percent for the State. If, for example, these values for the two county surveys are applied to the populations of the two areas, impressive differences can be obtained. Also, the differences between the obtained values and the State average will produce widely differing values. The purpose of Table 4.20 is simply to show that different areas of the State have different incidence ratios within selected disability categories. Another example, again using Augusta County and Wise County, is found in the category "Psychosis and Neurosis," where the former has 3.0 percent and the latter 1.3 percent, the State average being 1.5 percent. A striking example of what might be termed "regional contribution" to selective disability-categorization is found in the category "Orthopedic," where Alexandria reported 5.8 percent, Wise County 9.5 percent, and Norfolk 9.1 percent, the State average being 7.6 percent. The incidence of orthopedic type disabilities would seem to be appreciably greater in the Tidewater and Southwest Virginia areas.

However, while obvious differences exist between the five communities, *it should be noted that without exception* the domain of each category is not violated by any single value: in categories where the values are low they are *relatively* low for all five area values, and in categories where the values are somewhat higher they are higher for all five area values. *Radical differences are not found.* Values that would provide impetus for drastic revision of planning efforts in order to provide vocational rehabilitation services for selective disability categories in certain areas of the State are not in evidence. There is no reason to provide highly selective services in particular areas, for obtained incidence values tend more to promote the rationale that *only extensive services for all disability types in all areas of the State will in fact satisfy the demand for rehabilitation services.* Any attempt to isolate areas with elaborate facilities for certain *disability treatment is probably not necessary.*

Extent of Limitation by Selected Disability Categories. Table 4.21 was constructed using all respondents to the health interview section of the "com-

Table 4.20—Five Community Total Incidence Values for Selected Disabilities

	Community												
Disability Category	*Augusta County*	%(a)	*Petersburg*	%	*Norfolk*	%	*Alexandria*	%	*Wise County*	%	*Statewide*	%	*Percent of total no. of disabilities*
Visual Impairments	11	1.2	27	2.8	19	1.8	7	1.2	34	4.0	98	2.3	8.7
Hearing Impairments	14	1.6	18	1.9	24	2.3	6	1.1	33	3.9	95	2.2	8.4
Orthopedic Impairments	54	6.3	65	6.8	94	9.1	35	6.1	80	9.5	328	7.7	29.1
Amputations	3	0.3	6	0.6	5	0.4	1	0.2	6	0.7	21	0.4	1.9
All 500s	38	4.4	13	1.4	25	2.4	6	1.1	13	1.5	95	2.2	8.4
Psychosis & neurosis	26	3.0	8	0.8	14	1.4	5	0.9	11	1.3	64	1.5	5.7
Other personality disorders	10	1.2	5	0.5	7	0.7	1	0.2	2	0.2	25	0.6	2.2
Other	2	2.3	0	0.0	4	0.3	0	0.0	0	0.0	6	0.1	0.5
All 600s	82	9.5	79	8.3	134	12.9	55	9.7	140	16.6	490	11.5	43.5
Cardiac & circulatory	28	3.3	26	2.7	44	4.2	15	2.6	46	5.4	159	3.7	14.1
Epilepsy	2	0.2	0	0.0	3	0.3	2	0.4	2	0.2	9	0.2	0.8
Tuberculosis (pulmonary)	2	0.2	3	0.3	2	0.2	0	0.0	1	0.1	8	0.2	0.7
Hernia	1	0.1	1	0.1	1	0.1	0	0.0	0	0.0	3	0.1	0.3
Other	49	5.7	49	5.2	84	8.1	38	6.7	91	10.8	308	7.2	27.3
Total	202	23.4	208	21.9	301	29.0	110	19.3	306	36.2	1127(b)	24.7	
N=	861		949		1037		569		845		4261		

(a) All percentages are the ratio of incidence to the N used per column.

(b) Nine reported disabilities were unclassified by the procedure used to generate data for this Table. The actual number of general disabilities reported was 1118.

munity survey" questionnaire. (All age groups are represented.) Of the 1,328 limitations reported, 1,054 were of no consequence to the disabled. Of the total, 163 persons reported disabilities serious enough to be classified in either the first or second category of "extent of limitation," meaning that the disability conditions reported were severe major activity limitations. This left 111 persons with "extent of limitation #3," which was defined as being relatively free of *serious* limitation. (Subsequent analyses often incorporate these "extent of limitations" data as the basis for estimation and projection of incidence.)

Again, it should be recalled that the values reported for selected disability types within the five survey areas did not deviate seriously among areas. This is true also for the findings on "extent of limitations," which seem to follow, in general, the pattern observed for State averages; i.e., 8.1 percent severe, 4.1 percent mild-severe, 8.4 percent moderate, and 79.4 percent disabled but no limitation.

In conclusion, *extent of limitation seems to follow a well defined pattern, where about 20 percent of the population of disabled consider themselves handicapped;* 8.1 percent of the disabled are severely handicapped; and 12.3 percent of the disabled limited enough to perhaps qualify for vocational rehabilitation services. *This 12.3 percent of the total disabled amounts to approximately 3.8 percent of the total population surveyed during the course of community surveys. Applied to the State using the 1968 population value of 4,680,327 it would be, found that 177,852 persons could be in need of rehabilitation* services. (Based on these data it would seem quite likely that this is really a very low estimate of incidence. Those in one extent of limitation category might be in one of the other categories when examined by a physician. However, the reporting process would seem to be most suspect due to underestimating the extent of limitation by the person interviewed, unless the disability were such that the limitations were obvious to all concerned. Perhaps another source of error would be in this same context, where the respondent failed to identify the disability or, due to reluctance, failed to report the disability. Exactly how severe these problems are with respect to the estimation of incidence is debatable in that the effect probably is to lower the reported values, but by how much and in which categories is unknown. Particularly, the assessment of extent would seem to vary by considerable proportions among certain personality types, where the type of disability might play a major role in the assignment of extent. For example, the mentally retarded might be reported as having only the slightest of limitation in a truly severe case, while the orthopedically disabled, being a more "acceptable" disorder, might be reported with a higher degree of precision. The exactness of the data is unknown, but when all information is considered the probable result is an estimate substantially higher than that presented here.)

A more concise table is used to examine the question of extent of limitation by disability type in Table 4.22. This table is an extention of Table 4.21 in that the number used for evaluation in each case is the total incidence for that particular question. Augusta County has a reported incidence value of fourteen for visual disabilities of all types (for all age groups). These fourteen cases are also shown to be 5.8 percent of the reported total incidence for Augusta County, and 1.6 percent of the reported incidence value for the total number of persons in the area. This compares with the State values of 8.6 percent and 2.7 percent respectively. Hence it seems that visual incidence *per se* in Augusta County was a bit somewhat lower than for the State as a whole on both evaluations.

For the State, 31.2 percent of the respondents reported some disability. Using this value, Augusta County and Norfolk are about at the expected value, Petersburg and Alexandria below the expected value, and Wise County far above the value. The contrast between Wise County and Alexandria is the most dramatic. Wise County has an incidence ratio of 43.7 percent while Alexandria has a 23.4 percent ratio. If total incidence for all age groups is the only consideration, then it is obvious that the demand, per capita, for rehabilitation services, in Wise County will be far greater than that in Alexandria. (Only minor differences in the values of Table 4.22 are required to produce some startling changes in total incidence findings. Extreme caution should be exercised when using individual values, although this is not meant to detract from the validity of the data for the areas generally, rather, it simply points up the relative effect of the different values.)

These data were derived using only severe and moderate-severe limitations (categories one and two). Of the people in Augusta County 2.32 percent reported a limitation which probably would be severe enough to qualify them for rehabilitation services. Petersburg reported 2.71 percent, Norfolk 4.73 percent, Alexandria 3.16 percent, and Wise County 5.92

TABLE 4.21—Extent of Limitation, All Reported Age Levels, for Augusta County and Petersburg(a)

In answer to this question:	*Extent of Limitation*(b)							
	Augusta County				*Petersburg*			
"Does any member of your family have:	*Severe 1*	*2*	*3*	*None 4*	*Severe 1*	*2*	*3*	*None 4*
1. trouble seeing?"	1	0	1	12	1	2	1	28
2. trouble hearing?"	2	2	1	17	0	1	1	17
3. permanent stiffness or deformity of the body?"	2	3	7	20	5	3	6	25
4. back or spine trouble?"	2	0	2	22	1	1	2	21
5. paralysis of any kind?"	0	1	1	8	2	1	4	7
6. a missing arm, foot, leg, fingers, or toes?"	1	0	0	4	0	0	0	6
7. epilepsy?"	1	0	0	1	1	0	0	3
8. heart condition?"	2	0	5	35	1	0	4	28
9. tuberculosis or trouble breathing?"	1	0	4	10	1	0	0	8
10. speech defect?"	0	0	0	8	1	0	0	5
11. stomach trouble?"	1	0	0	15	1	1	0	27
12. an alcoholic problem?"	1	0	0	4	0	0	0	5
13. mental problems?"	0	0	0	18	1	0	0	9
14. a condition present since birth or anything else wrong with him that we have not asked about?"	0	0	3	24	2	0	0	5
Total incidence of limitations	14	6	24	198	17	9	18	194
Percent total	5.8	2.3	9.9	81.8	7.1	3.8	7.6	81.5

(a) Total N for all five communities = 4261 persons from 1291 families; Augusta County = 861; Petersburg = 949; Norfolk = 1037; Alexandria = 596; Wise County = 845; State-wide = 4261.

(b) Includes all persons of all ages—definitions of categories are the same as those itemized earlier. 1 and 2 are severe.

TABLE 4.21—Extent of Limitation, All Reported Age Levels, for Norfolk and Alexandria (continued) (a)

In answer to this question:	*Extent of Limitation* (b)							
	Norfolk				*Alexandria*			
"Does any member of your family have:	*Severe 1*	*2*	*3*	*None 4*	*Severe 1*	*2*	*3*	*None 4*
1. trouble seeing?"	3	1	2	14	0	3	0	5
2. trouble hearing?"	3	0	0	25	1	0	2	5
3. permanent stiffness or deformity of the body?"	2	4	4	29	1	0	1	7
4. back or spine trouble?"	1	1	4	32	1	1	1	19
5. paralysis of any kind?"	2	2	4	12	1	1	2	3
6. a missing arm, foot, leg, fingers, or toes?"	0	0	0	10	1	0	0	2
7. epilepsy?"	0	2	1	2	0	0	0	3
8. heart condition?"	6	5	1	38	3	0	1	14
9. tuberculosis or trouble breathing?"	3	0	1	25	0	0	1	6
10. speech defect?"	1	0	1	4	1	1	0	8
11. stomach trouble?"	3	0	0	31	1	0	0	13
12. an alcoholic problem?"	1	0	0	7	0	0	0	2
13. mental problems?"	1	1	1	17	2	0	0	8
14. a condition since birth or anything else wrong with him that we have not asked about?"	5	2	3	28	0	0	1	11
Total incidence of limitations	31	18	22	274	12	6	9	106
Percent of total	9.0	5.2	6.4	79.4	9.0	4.5	6.8	79.7

(a) Total N for all five communities = 4261 persons from 1291 families; Augusta County = 861; Petersburg = 949; Norfolk = 1037; Alexandria = 596; Wise County = 845; State-wide = 4261.

(b) Includes all persons of all ages—definitions of categories are the same as those itemized earlier. 1 and 2 are severe.

TABLE 4.21—Extent of Limitation, All Reported Age Levels, for Wise County and the State (continued) (a)

In answer to this question:	*Extent of Limitation* (b)								
	Wise County				*State*				
"Does any member of your family have:	*Severe 1*	*2*	*3*	*None 4*	*Severe 1*	*2*	*3*	*None 4*	*Total*
1. trouble seeing?"	1	3	2	34	6	9	6	93	114
2. trouble hearing?"	4	1	2	30	10	4	6	94	114
3. permanent stiffness or deformity of the body?"	2	3	5	23	12	13	23	104	152
4. back or spine trouble?"	3	1	11	34	8	4	20	128	160
5. paraylsis of any kind?"	5	2	1	11	10	7	12	41	70
6. a missing arm, foot, leg, fingers, or toes?"	0	0	0	9	2	0	0	31	33
7. epilepsy?"	0	0	0	8	2	2	1	17	22
8. heart condition?"	7	1	10	38	19	6	21	153	199
9. tuberculosis or trouble breathing?"	7	2	2	23	12	2	8	72	94
10. speech defect?"	1	1	1	8	4	2	2	33	41
11. stomach trouble?"	1	1	2	38	7	2	2	124	135
12. an alcoholic problem?"	0	0	0	1	2	0	0	19	21
13. mental problems?"	2	0	0	15	6	1	1	67	75
14. a condition present since birth or anything else wrong with him that we have not asked about?"	1	1	2	10	8	3	9	78	98
Total incidence of limitations	34	16	38	282	108	55	111	1054	1328
Percent of total	9.2	4.3	10.3	76.2	8.1	4.1	8.4	79.4	

(a) Total N for all five communities = 4261 persons from s are the same as those itemized earlier. 1 and 2 are severe. Norfolk = 1037; Alexandria = 596; Wise County = 845; S1291 families; Augusta County = 861; Petersburg = 949;

(b) Includes all persons of all ages—definitions of categorietate-wide = 4261.

percent. It should be obvious that the areas of Virginia investigated are quite different with respect to *incidence of severe limitations*. The State average for all limitations for all ages 3.83 percent, and it could be concluded that Norfolk and Wise County contribute more than their proportionate "share" of disabilities where severe limitations are present, and that Augusta County, Alexandria and Petersburg contribute less than what would be expected if the State average were applied to the population. One possible explanation for this finding could be that the types of people and the nature of employment in these areas are such that expected incidence values (with respect to areas such as Alexandria and Petersburg) would be higher due to activities associated with incidence of certain disability types.

These data include all persons of all age groups, and further refinement is desired to make possible identification of an element of the population that would meet both "severity of limitation" and "age eligibility" requirements. The national estimate for those needy and eligible for vocational rehabilitation services was 1.9 percent of the total population. Since to be eligible means that several criteria must be met (age, severity of limitation, promise of recovery such that the person will return to work extent of personal resources) the number of disabled who meet both age and severity standards will be lowered further as the referral process weeds out those not likely to return to gainful employment or not satisfying other eligibility criteria. For this study the only practical variables that can be interwoven effectively into the determination of eligibility process appear to be age and extent of limitation.

Table 4.24 shows that 725 disabilities were reported for persons in the age group 16 to 64. Of these, 31 percent were orthopedic, over 11 percent were "500's," over 11 percent were cardiac and circulatory cases, and some 41 percent were listed in the "600's" category (which includes cardiac and circulatory). The ratios for eligible population and incidence (a total value) are:

Wise County = 38.4%
Norfolk = 33.9%
Augusta Co. = 26.8%
Petersburg = 22.8%
Alexandria = 21.7%
STATEWIDE = 29.1%

where the ratio indicates the proportion of disabled persons in each area with respect to the 16 to 64 population in that area.

These data confirm earlier findings indicating Wise County to be the greatest source of disabled

TABLE 4.22—Estimated Total Incidence of Limitations by Questionnaire Items for the Five Survey Areas(a)

	Community																	
In answer to this question:	*Augusta County*			*Petersburg*			*Norfolk*			*Alexandria*			*Wise County*			*State-wide*		
"Does any member of your family have:	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*
	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%
1. trouble seeing?"	14	5.8	1.6	32	13.4	3.4	20	5.8	1.9	8	6.0	1.4	40	10.8	4.7	114	8.6	2.7
2. trouble hearing?"	22	9.1	2.6	19	8.0	2.0	18	8.1	2.7	8	6.0	1.4	37	10.0	4.4	114	8.6	2.7
3. permanent stiffness or deformity of the body?"	32	13.1	3.7	39	16.4	4.1	39	11.3	3.8	9	6.8	1.6	33	8.9	3.9	152	11.4	3.6
4. back or spine trouble?"	26	10.7	3.0	25	10.5	2.6	38	11.0	3.7	22	16.5	3.9	49	13.3	5.8	170	12.8	4.0
5. paralysis of any kind?"	10	4.1	1.2	14	5.9	1.5	20	5.8	1.9	7	5.3	1.2	19	5.1	2.2	70	5.3	1.6
6. a missing arm, foot, leg, fingers, or toes?"	5	2.1	0.6	6	2.5	0.6	10	2.9	1.0	3	2.3	0.5	9	2.4	1.1	33	2.5	0.8
7. epilepsy?"	2	0.8	0.2	4	1.7	0.4	5	1.4	0.5	3	2.3	0.5	8	2.2	0.9	22	1.7	0.5
8. heart condition?"	42	17.5	4.9	33	13.9	3.5	50	14.5	4.8	18	13.5	3.2	56	15.2	6.6	189	14.2	4.4
9. tuberculosis or trouble breathing?"	15	6.2	1.7	9	3.8	0.9	29	8.4	2.8	7	5.3	1.2	34	9.2	4.0	94	7.1	2.2
10. speech defect?"	8	3.3	0.9	6	2.5	0.6	6	1.7	0.6	10	7.5	1.8	17	4.6	2.0	75	5.6	1.8
11. stomach trouble?"	16	6.6	1.9	29	12.2	3.1	34	9.8	3.3	14	10.5	2.5	42	11.4	5.0	135	10.2	3.2
12. an alcoholic problem?"	5	2.1	0.6	5	2.1	0.5	9	2.6	0.9	2	1.5	0.4	1	0.3	0.1	21	1.6	0.5
13. mental problems?"	18	7.4	2.1	10	4.2	1.1	20	5.8	1.9	10	7.5	1.8	17	4.6	7.0	75	5.6	1.8
14. a condition present since birth or anything else wrong with him that we have not asked about?"	27	11.2	3.1	7	2.9	0.7	38	11.0	3.7	12	9.0	2.1	14	3.8	1.7	98	7.4	2.3
Total incidence of limitations	242			238			346			133			369			1328		
Percent of population		28.1			25.1			33.4			23.4			43.7			31.2	
Population		861			949			1037			569			845			4261	

(a) A is defined as the total incidence of limitations
B is defined as the percent of the incidence N (T)
C is defined as the percent of the community N (T)

TABLE 4.23—Estimated Incidence of Severe(a) Limitations by Community(b)

	Community																	
In answer to this question:	*Augusta County*			*Petersburg*			*Norfolk*			*Alexandria*			*Wise County*			*State-wide*		
“Does any member of your family have:	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*
	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%
1. trouble seeing?”	1	5.0	0.12	7	11.5	0.31	4	8.2	0.39	3	16.7	0.53	4	8.0	0.47	15	9.2	0.35
2. trouble hearing?”	4	20.0	0.46	10	3.8	0.11	3	6.1	0.29	11	5.6	0.18	5	10.0	0.59	14	8.6	0.33
3. permanent stiffness or deformity of the body?”	5	25.0	0.58	8	30.8	0.84	6	12.2	0.58	1	5.6	0.18	5	10.0	0.59	25	15.3	0.59
4. back or spine trouble?”	2	10.0	0.23	2	7.7	0.21	2	4.1	0.19	2	11.1	0.35	4	8.0	0.47	12	7.4	0.28
5. paralysis of any kind?”	1	5.0	0.12	3	11.5	0.32	4	8.2	0.39	2	11.1	0.35	7	14.0	0.83	17	10.4	0.40
6. a missing arm, foot, leg, fingers, or toes?”	1	5.0	0.12	0	0.0	0.00	0	0.0	0.00	1	5.6	0.18	0	0.0	0.00	2	1.2	0.05
7. epilepsy?”	1	5.0	0.12	1	3.8	0.11	2	4.1	0.19	0	0.0	0.00	0	0.0	0.00	4	3.5	0.09
8. heart condition?”	2	10.0	0.23	1	3.8	0.11	11	22.4	1.06	3	16.7	0.53	8	16.0	0.95	25	15.3	0.59
9. tuberculosis or trouble breathing?”	1	5.0	0.12	1	3.8	0.11	3	6.1	0.29	0	0.0	0.00	9	18.0	1.07	14	8.6	0.32
10. speech defect?”	0	0.0	0.00	1	3.8	0.11	1	2.0	0.10	2	11.1	0.35	2	4.0	0.24	6	3.7	0.14
11. stomach trouble?”	1	5.0	0.12	2	7.7	0.21	3	6.1	0.29	1	5.6	0.18	2	4.0	0.24	9	5.5	0.21
12. an alcoholic problem?”	1	5.0	0.12	0	0.0	0.00	1	2.0	0.10	0	0.0	0.00	0	0.0	0.00	2	1.2	0.05
13. mental problems?”	0	0.0	0.00	1	3.8	0.11	2	4.1	0.19	2	11.1	0.35	2	4.0	0.24	7	4.3	0.16
14. a condition present since birth or anything else wrong with him that we have not asked about?”	0	0.0	0.00	2	7.7	0.21	7	14.3	0.68	0	0.0	0.00	2	4.0	0.24	11	6.7	0.26
Total incidence of limitations	20			26			49			18			50			163		
Percent of population		2.32			2.71			4.73			3.16			5.92			3.83	
Population		861			949			1037			569			845			4261	

(a) Uses extent of limitation categories 1 and 2 only (these represent the most severe limitations)

(b) A = sum of category 1 and category 2

B = percent of total severe limitations for that survey (T)

C = percent of community total (N)

persons in terms of population and Alexandria contributing least to total State disability incidence. Moreover, Augusta County, Petersburg, and Alexandria group together as do Norfolk and Wise County. If speaking in terms of the ratio of total disability among eligible persons, the Tidewater and Southwest Virginia Areas would be those where the greatest prevalence of disablities would be expected. The State average for the ratio between eligible population and incidence is 29.1 percent. This can be interpreted as meaning that if the population of age eligible (16-64) persons of the State were used, and the value for total incidence were used, then 58.4 percent of the population would be eligible by age (58.4 percent of the present sample was between ages 16 and 64), or 2,732,767 (58.4 percent times 4,679,395) of which 795,235 persons would be disabled to some extent (2,732,767 times 29.1 percent). This represents the State value for total incidence of all disability types for those persons who most likely would be eligible *if age were the only criterion* for entrance into the referral process.

Two points should be restated here. First the proportion of age eligible people in Alexandria is equal to 67.1 percent of the total population, while that of Augusta County is but 54.1 percent of the total population. These findings may seem to contradict, for it might be expected that the more persons in the age group 16 to 64 would bear some relationship to total incidence because these persons constitute the vast majority of the work force in most areas. However, incidence of disabilities among persons over 64 years is greater than for any other single age group. Therefore, the fewer old persons in a sample the lower the incidence value. Note that the seven planning areas of the State of Virginia are quite different with respect to their proportions of age eligible persons. The composition of Alexandria is rapidly shifting toward a younger age while that of Wise County is shifting toward the older age as out-migration siphons off the younger persons. Wise County would be expected to have a higher incidence value than Alexandria. Also, and perhaps more important, the older residents of Southwest Virginia are most likely to remain in the general area, often in the same location for many years. Wise County, Augusta County and Petersburg fall into this classification, while Norfolk and Alexandria seem to have considerably more persons within the range of age eligibility. Second, the greatest incidence value was found in Wise County, the area with the lowest proportion of age eligible cases. However, the interpretation that this value would be solely

TABLE 4.24.—Estimated Total Incidence by Selected Disability Categories for Five Virginia Communities., Age 16-64(a)

	Community																	
	Augusta County			*Petersburg*			*Norfolk*			*Alexandria*			*Wise County*			*Total*		
	A	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*D*
Disabling condition	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%	#	%	%
Visual impairment	3	2.4	0.41	12	9.8	1.66	1	5.1	1.52	3	3.6	0.41	15	8.4	2.07	44	6.07	1.77
Hearing impairment	6	4.8	0.83	7	5.7	0.97	20	9.3	2.76	4	4.8	0.55	19	10.7	2.62	56	7.72	2.25
Orthopedic impairments	38	30.4	5.24	44	35.6	6.07	65	30.1	8.97	32	38.6	4.41	48	27.0	6.62	227	31.31	9.12
Amputations	1	0.8	0.14	4	3.3	0.55	2	0.9	0.28	1	1.2	0.14	4	2.2	0.55	12	1.66	0.48
All 500's	31	24.8	4.28	12	9.8	1.66	24	11.1	3.31	6	7.2	0.83	11	6.2	1.52	84	11.59	3.37
Psychosis and neurosis	22	17.6	3.03	7	5.7	0.97	14	6.5	1.93	5	6.0	0.69	10	5.6	1.38	58	8.00	2.33
Other personality disorders	9	7.2	1.24	5	4.1	0.69	10	4.6	1.38	1	1.2	0.14	1	0.6	0.14	26	3.59	1.04
All 600's	46	36.8	6.34	44	35.6	6.07	94	43.5	12.97	37	44.6	5.10	81	45.5	11.17	302	41.66	12.13
Cardiac & circulatory	14	11.2	1.93	13	10.7	1.79	30	13.9	4.14	0	0.0	0.00	23	12.9	3.17	80	11.03	3.21
Epilepsy	0	0.0	0.00	0	0.0	0.00	3	1.4	0.41	1	1.2	0.14	2	1.1	0.28	6	0.83	0.24
Tuberculosis (pulmonary)	2	1.6	0.28	3	2.4	0.41	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	5	0.69	0.20
Hernia	1	0.8	0.14	1	0.8	0.14	1	0.5	0.14	0	0.0	0.00	0	0.0	0.00	3	0.41	0.12
Other	29	23.2	4.00	27	22.0	3.72	60	27.8	8.28	36	43.4	4.97	56	31.5	7.72	208	28.69	8.36
Total Disabilities	125		17.24	123		16.97	216		29.79	83		11.45	178		24.55	725		29.13
Total respondents	861			949			1,037			569			845			4,261		
N for 16-64 (age)	466			540			637			382			464			2,489		
Percent 16-64 (age)	54.1			56.9			61.4			67.1			54.9			58.4		

(a) A = incidence
B = percent of incidence of disabilities for the community
C = percent of total incidence for all five communities
D = percent of total population 16-64 reporting this disability

dependent upon the older persons present is not wholly justified, for the incidence value in Norfolk was second only to that of Wise County (and far greater than that of Alexandria). The proportion of age eligible persons in Norfolk was second only to Alexandria, meaning that the number of disabilities was not directly related to the prevalence of older persons (Table 4.24).

The expected incidence of eligible cases in all disability categories depends on, first, the available number of disabilities within each category and, second, the proportion of these cases that will be severe enough (but not too severe) to warrant rehabilitation services. Obviously, several additional criteria govern real eligibility (as opposed to stated eligibility, where the actual case to be evaluated has only rather nebulous criteria to satisfy). Included would be those items stated earlier—cost, severity, age, and availability of needed services must be considered. However, to define eligibility in some terms seems worthwhile. Data in Tables 4.25 and 4.26 were structured to provide information for making estimates of selected incidence values. For age eligible persons (age 16 to 64), 13.5 percent of those limited in the visual category would be limited severely enough to qualify for vocational rehabilitation services (by adding the first two categories and dividing by the total number of visual limitations reported). For this age group, the category "other" (600's), although having the greatest prevalence of any category for the sample population, contained only 9.7 percent of the 277 reported severe limitations. In contrast, of fifty-nine limitations reported for the psycho-neurotic category (500 to 519) 16.9 percent were "severe," and of the other "500's," (520 to 539), 26.9 percent were considered "severe." Further, hearing had but 5.8 percent with severe limitations, a very slight proportion of the total incidence, especially in relation to other proportions reported in Table 4.25. As would be expected, those cases listed as severe in the various categories were not all equally severe with respect to ease of feasibility of rehabilitation. Eligibility data which follow are presented under the assumption that severe cases are in fact associated with persons who satisfy other eligibility criteria and who are usually accepted for vocational rehabilitation services. Therefore, if the case is reported as age eligible and the extent of limitation is severe, then it seems reasonable for the case to be included in tables where estimates of eligible incidence are presented.

Estimates of 1968 Population and Projected Population Values through 1980. In the following tables several types of estimates for current incidence within selected disability categories are presented. The purpose of identifying these estimates again is to provide data for use in comparing and appraising incidence in 1968. These incidence data include estimates using: (1) national figures for total and eligible incidence; (2) incidence estimates based on earlier studies—the independent study and Dishart's Study; (3) an evaluation of the caseload as reported by the State agency, also in terms of Dishart's study; and (4) esti-

TABLE 4.25.—Estimated Incidence by Selected Disability Categories and by Extent of Limitation, Age 16 to 64(a)

Disability Category	Extent of limitation								"1"		"2"		"3"	
	1	%(b)	2	%	3	%	4	%	1 + 2(c) #	%(d)	1 + 2 + 3 #	%	1 + 2 + 3 + 4 #	%
Visual impairment	2	5.4	3	8.1	2	5.4	30	81.1	5	0.20	7	0.28	37	1.49
Hearing impairment	2	3.8	1	1.9	2	3.8	47	90.4	3	0.12	5	0.20	52	2.09
Orthopedic impairment	14	6.6	14	6.6	35	16.5	149	70.3	28	1.12	63	2.53	212	8.52
Absence or amputation	2	13.3	0	0.0	0	0.0	13	86.7	2	0.08	2	0.08	15	0.60
Mental, psychoneural, other personality disorders	7	11.9	3	5.1	1	2.7	48	81.4	10	0.40	11	0.44	59	2.37
Psychosis and neurosis (500-519)(f)	(3)	(9.1)	(0)	(0.0)	(1)	(3.0)	(29)	(87.9)	(3)	(0.12)	(4)	(0.16)	(33)	(1.33)
Other 500's (520-534)(f)	(4)	(15.4)	(3)	(11.5)	(0)	(0.0)	(19)	(73.1)	(7)	(0.28)	(7)	(0.28)	(26)	(1.04)
Other disabling conditions	18	6.5	9	3.2	23	8.3	227	81.9	27	1.08	50	2.01	277	11.13
Epilepsy(g)	(0)	(0.0)	(0)	(0.0)	(1)	(16.7)	(5)	(83.3)	(0)	(0.00)	(1)	(0.04)	(6)(e)	(0.24)
Cardiac & circulatory(g)	(5)	(5.8)	(4)	(4.7)	(9)	(10.5)	(68)	(79.1)	(9)	(0.36)	(18)	(0.72)	(86)	(3.46)
Tuberculosis (pulmonary)(g)	(0)	(0.0)	(0)	(0.0)	(0)	(0.0)	(5)	(100.0)	(0)	(0.00)	(0)	(0.00)	(5)(e)	(0.20)
Hernia(g)	(0)	(0.0)	(0)	(0.0)	(0)	(0.0)	(3)	(100.0)	(0)	(0.00)	(0)	(0.00)	(3)(e)	(0.12)

(a) Persons included in this anaylsis would most likely be age-eligible for vocational rehabilitation services.

(b) Percents represent the ratio of category to total

(c) Extent "1" plus extent "2"

(d) Percent of the age eligible population with this extent (N/2489)

(e) These values are somewhat lower than national estimates for these categories. The national estimates for rare disabilities may be more accurate.

(f) The numbers represent categories in VRA disability codes.

(g) These are selected sub-categories of "Other disabling conditions."

TABLE 4.26—Estimated Incidence by Selected Disability Categories and by Extent of Limitation, Age 16 to 64(a)

Disability Category	Extent of limitation								"1"		"2"		"3"	
	1	%(b)	2	%	3	%	4	%	1 + 2(c) #	%(d)	1 + 2 + 3 #	%	1 + 2 + 3 + 4 #	%
Visual impairment	2	5.0	3	7.5	2	5.0	33	82.5	5	0.18	7	0.26	40	1.50
Hearing impairment	2	3.7	1	1.9	2	3.7	49	90.7	3	0.11	5	0.18	54	2.03
Orthopedic impairment	14	6.5	14	6.5	36	16.7	151	70.2	28	1.05	64	2.40	215	8.08
Absence or amputation	2	13.3	0	0.0	0	0.0	13	86.7	2	0.08	2	0.08	15	0.60
Mental, psychoneural personality disorders	7	11.5	3	4.9	1	1.6	50	82.0	10	0.37	11	0.41	61	2.29
Psychosis and neurosis (500-519)	(3)	(8.82)	(0)	(0.0)	(1)	(2.9)	(30)	(88.2)	(3)	(0.11)	(4)	(0.15)	(34)	(1.27)
Other 500's (520-534)	(4)	(14.8)	(3)	(11.1)	(0)	(0.0)	(20)	(74.1)	(7)	(0.26)	(7)	(0.26)	(27)	(1.01)
Other disabling conditions	20	6.7	9	3.0	24	8.0	246	82.3	29	1.09	53	1.99	299	11.24
Epilepsy	(0)	(0.0)	(0)	(0.0)	(1)	(16.7)	(5)	(83.3)	(0)	(0.00)	(1)	(0.03)	(6)(e)	(0.24)
Cardiac & circulatory	(6)	(6.7)	(4)	(4.4)	(9)	(10.0)	(71)	(78.9)	(10)	(0.37)	(19)	(0.71)	(90)	(3.38)
Tuberculosis (pulmonary)	(0)	(0.0)	(0)	(0.0)	(0)	(0.0)	(5)	(100.0)	(0)	(0.00)	(0)	(0.00)	(5)(e)	(0.20)
Hernia	(0)	(0.0)	(0)	(0.0)	(0)	(0.0)	(3)	(100.0)	(0)	(0.00)	(0)	(0.00)	(3)(e)	(0.12)

(a) Persons included in this analysis would most likely be age eligible for vocational rehabilitation services.

Compare Table 4.32 to Table 4.32(a). The only difference is in the definition of the lower limit for age eligibility. With the exceptions of the categories visual and the "500's," the data of the two categories are quite similar. Little information relative to difference by age 14 and 15 were observed.

(b) Percents represent the ratio of category to total.

(c) Extent "1" plus extent "2."

(d) Percent of the age eligible population with this extent (N/2660)

(e) These values are somewhat lower than national estimates for these categories. The national estimates for rare disabilities may be more accurate.

mates made using the data collected by surveying five communities in Virginia (the "community surveys").

The following procedure was incorporated for the purpose of estimation. Virginia was divided into seven planning areas. Using estimated population values supplied by the Bureau of Population and Economic Research (University of Virginia) each planning area was evaluated in order to identify the proportion of the total population that consisted of persons sixteen to sixty-four years of age. These arbitrary limits for establishing age eligibility were chosen on the basis of the age group findings and with the realization that persons outside these limits probably would not be helped in great numbers by the vocational rehabilitation agency (with the exception of younger students). While of importance as a social responsibility, the definition of eligibility precludes inclusion of persons below sixteen years of age and above sixty-four for general planning purposes. However, the trend is toward lowering the minimum age requirement; this is especially important in the "school units" of the agency where fourteen years is currently the minimum age necessary for referral for vocational rehabilitation services.

Table 4.27 provides values for Virginia's population from 1960 through 1985. Within the intervals reported, the percentage increase has been added to the original data, the purpose being to make possible comparisons between the increases for various years. For example, the increase between 1960 and 1965 was 12.3 percent while the increase between 1980 and 1985 has been projected at 8.3 percent. The second part of the table contains estimates for 1965 to 1970, the method of estimation being an increment of 1.7 percent annually. Comparisons of the two values for 1970 indicate that there is some measure of inconsistency in these data, and that if one value for increase is used then the resultant value will differ from that obtained if the other increment is used. This is not a major problem but should be recognized when attempting to estimate incidence of rare chronic conditions.

As shown earlier, population values in different areas of Virginia do not increase proportionately. Beginning with Table 4.28 the State has been divided into seven planning areas and the contribution being made to the State population total by each area is examined. In Table 4.28 the Statewide value calculated by adding the representation from each area is approximately 4.6 million for 1967. Of this total, almost three times as many persons are found in Area VII as in Area I, about 2.5 times as many in Area VII as in Area IV. This table yields gross estimates of *total* population for the areas. Table 4.29 was constructed using the data from Table 4.28 and adjusting the area totals for age sixteen to sixty-four years only, the difference being that between, for example 387,000 and 224,000 in Area I for 1967.

For purposes of increasing accuracy of estimations of incidence values within planning areas and within selected disability categories, the population values for the areas were adjusted for differential proportions of age eligible persons whenever eligibility was the issue. If only total incidence were the question, population values within the various areas were not adjusted from those reported earlier. Considerable use of these values was made in deriving values for 1970 and 1975 that would reflect the incidence/prevalence of those selected disabilities as evidenced in the seven planning areas.

1967-1985 Estimates of Incidence by Selected Disability Categories. Table 4.30 provides estimates for selected categories of impairments at several points in time. The values reported are for total incidence (not total disabled persons) and all age levels are included. The State value for percentage so affected is a constant for the proportion of the population involved, the only variable being population changes from year to year. The percent within any given category is the result of estimating the proportion of the total population that would be expected to have a chronic condition, the values being determined by using the *community survey data.* In 1967 it is estimated that some 1.2 million Virginians were impaired. By 1985 this estimate will increase to 1.6 million. However, it has been shown that a person with a chronic condition on the average will have two conditions; therefore, the actual total number of persons by 1985 with chronic conditions or impairments is probably approximately 800,000.

The procedure for estimating eligibility for these persons is by no means easily accomplished. (See earlier segments of this report where the eligibility questions are discussed.) It has been shown that eligibility incidence probably is a function of at least three variables: age, severity of impairment, and population.

Table 4.31 based on findings from the *community survey data,* provides an approximation of the incidence and extent of limitation by selected disability categories. With the exceptions of the categories "tuberculosis (pulmonary)" and "hernia," these data are of considerable worth in estimating eligibility by disability categories, for all categories do not have identical proportions of severe incidence. Therefore, accuracy of eligibility estimation is dependent in part on severity of limitation which is ascertained from Table 4.38.

Using the State average for severe limitations, it is reasonable to estimate eligible incidence for all disabilities. Table 4.32 illustrates the variance in eligibility estimation when extent of limitation is included as a variable. It yields the estimated total incidence of eligible cases for those chronic conditions where the limitation is "severe," and Table 4.33 where *any* limitation is sufficient to qualify the case for acceptance. The difference between these two approximations is about 3 percent of the population of eligible age. Or, from a comparison of the two parts, some 80,000 people might be the difference. And, as the population changes in certain areas of the State, in that the proportion of the age group sixteen to sixty-four years changes. In addition, the estimated incidence for selected disability categories among planning areas is *not* constant. For example, visual impairments account for 2.3 percent of the total incidence for the State, but *only* 1.2 percent of the incidence reported for Planning Area II. Table 4.34 shows that the planning areas of Virginia are quite different with respect to incidence within the selected disability categories. In order to obtain reliable estimates of incidence for subsequent planning, legislation, and manpower considerations, the data must be adjusted to account for several important determinants of incidence as observed from the community survey data.

TABLE 4.27—Populations for Virginia, 1960 Projected Through 1985(a)

Year	*Estimated population (in thousands)*	*Percent increase*(b)
1960	3,967	—
1965	4,456	12.3
1970	4,776	7.2
1975	5,161	8.1
1980	5,599	8.5
1985	6,064	8.3

Estimations for 1965-1970

Year	*Estimated population (in thousands)*	*Percent increase*(d)
1965	4,456	—
1966	4,512	1.7
1967	4,589	1.7
1968	4,667	1.7
1969	4,746	1.7
1970	4,827	1.7

(a) Statewide values

(b) The last reported value is the base for subsequent interval increments.

(d) The estimated 1.7 percent value was obtained from the Metropolitan Survey: See APPENDIX I.

Table 4.35 provides estimates of eligible incidence by planning areas for 1970. These data have been adjusted to account for variance in age, planning area variance in age distribution, and planning area variance among disability categories. (The assumption being that if the person is limited by the condition then he will be eligible for vocational rehabilitation services.) Following the data in the table, it becomes evident that there is tremendous variation among planning areas with respect to selected disability categories. Table 4.36 follows an identical

TABLE 4.28—Estimated Populations by Planning Areas, 1967-1985 (in thousands) (a)

Planning area	*% of total population*(b)	*1967*	*1968*(c)	*1970*	*1975*	*1980*	*1985*(d)
Abingdon	8.41	387	393	402	434	471	510
Roanoke	9.82	452	459	469	507	550	595
Charlottesville	9.30	428	435	444	480	521	564
South Boston	10.67	491	499	510	551	597	647
Alexandria	19.67	905	920	939	1,015	1,101	1,193
Richmond	17.87	822	836	853	922	1,001	1,084
Norfolk	24.26	1,116	1,135	1,159	1,252	1,358	1,471
Statewide	100.00	4,601	4,679	4,776	5,161	5,599	6,064

(a) Source: based on Bureau of Population and Economic Research (University of Virginia) estimates.

(b) Percentages are those derived using the 1967 populations by areas.

(c) 1.7 percent times the 1967 population.

(d) Obviously, the precision of planning area estimates at this point is highly suspect. For example, considerable data exist and have been presented earlier in this report showing little reason to expect the relative populations per planning area to remain constant. No further data on this subject is currently available.

Table 4.29—Estimated Population Age 16 to 64, by Planning Areas for 1968-1985 (State Average) (a)

Number age 16 to 64 (in thousands)

Planning area(b)	*1967*	*1968*	*1970*	*1975*	*1980*	*1985*
Abingdon	224	228	233	252	273	296
Roanoke	262	266	272	294	319	345
Charlottesville	248	252	258	278	302	327
South Boston	285	289	296	320	346	375
Alexandria	525	534	545	589	639	692
Richmond	477	485	495	535	581	629
Norfolk	647	658	672	726	788	853
Statewide	2,668	2,712	2,771	2,994	3,248	3,517
Total population	4,601	4,679	4,776	5,161	5,599	6,064

(a) Based on the State average of 58 percent 16 to 64 in the total population. Survey data collected during the Community Survey Project tends to discredit such a table as this one for the constant does not apply within planning areas. Table 4.30 shows adjusted planning area populations based on the obtained survey findings.

(b) See Table 4.27 for Planning Area populations through 1985.

Table 4.29(a)—Population Age 16 to 64, by Planning Areas for 1968 to 1985 (Percentages derived from Survey Data) (a)

Number age 16 to 64 (in thousands)

Planning area	*1968*	*1970*	*1975*	*1980*	*1985*	%
Abingdon	216	221	238	259	280	54.9
Roanoke	248	254	274	298	322	54.1
Charlottesville	235	240	260	282	305	54.1
South Boston	284	290	314	340	368	56.9
Alexandria	617	630	681	739	801	67.1
Richmond	476	485	525	570	617	56.9
Norfolk	697	712	769	834	903	61.4
Total	2,773	2,832	3,061	3,322	3,596	
Statewide	2,731	2,789	3,014	3,270	3,541	58.4(c)
Total population	4,679	4,776	5,161	5,599	6,064	

(a) The percentages used are those derived in Table 4.6.

(b) Roanoke Planning Area was given the same ratio as was derived for Augusta County; South Boston was given the same ratio as was dervied from Petersburg (racial composition being the major assignment criterion).

(c) The State total of 58.4 percent was calculated directly from the total population.

procedure for 1975 eligible incidence. However, these Tables (4.35 and 4.36) do not take into account the extent of limitation as a variable in estimating incidence for categorical identification of incidence values. The extent is crucial in estimating incidence because the number estimated for total incidence in Virginia changes by almost 80,000, depending on which extent of limitation is used.

Table 4.37 includes information relative to the extent of limitation in addition to the actual incidence value among disability categories.

Using the information disability categories can be evaluated for incidence (both total and eligible) in terms of the probability that these individuals might be accepted for vocational rehabilitation services, based on the extent of limitation. In this table, three classifications have been derived where extent of limitation is the criterion for categorical assignment. For example, to be included in classification I, the reported impairment must have been either extent one or extent two (defined as severe). This is particularly important when severity of hearing impairments and orthopedic impairments are considered. Of the orthopedic cases, 13.2 percent were reported limited in either extent one or two, while only 5.8 percent of the hearing incidence was so limited. Clearly, the category of disability has much to do with the extent of limitations.

Tables 4.38 to 4.41 contain data for eligible incidence with respect to severe limitations and limita-

TABLE 4.30—Estimates of Total Incidence Within Selected Disability Categories Using the State Estimates Obtained From the Community Survey Data, 1967-1985(a)

Disability category	*% of population*	*1967*(b)	*1968*	*1970*	*1975*	*1980*	*1985*
Visual impairment	2.3	105,823	107,617	109,848	118,703	128,777	139,472
Hearing impairment	2.2	101,222	102,938	105,072	113,542	123,178	133,408
Orthopedic impairments	7.6	349,376	355,604	362,976	392,236	425,524	460,864
Absence or amputation	0.4	18,400	18,716	19,104	20,644	22,396	24,256
All 500's	2.2	101,222	102,938	105,072	113,542	123,178	133,408
Psychosis & neurosis	1.5	69,015	70,185	71,164	77,415	83,985	90,960
Other personality disorders	0.6	27,606	28,074	28,656	30,966	33,594	36,884
All 600's	11.4	524,514	533,406	544,464	588,354	638,286	691,296
Cardiac & circulatory	3.7	170,237	173,123	176,712	190,957	207,163	224,368
Epilepsy	0.2	9,202	9,358	9,552	10,322	11,198	12,128
Tuberculosis (pulmonary)	0.2	9,202	9,358	9,552	10,322	11,198	12,128
Hernia	0.1	4,601	4,679	4,776	5,161	5,599	6,064
Other 600's	7.2	331,272	336,888	343,872	371,952	403,128	436,608
Total		1,195,956	1,215,540	1,241,284	1,341,860	1,455,740	1,576,640

(a) See Table 4.3 for the derivation of percentages within categories.

(b) See "Assumptions and Limitations," at the end of the "Summary.

TABLE 4.31—Statewide Eligibility by Selected Disability Categories(a)

	Estimated incidence					
Disability category	*Severely limited*(b)		*All limitations*(c)		*All disabilities*(d)	
	#	%	#	%	#	%
Visual impairment	5	0.20	7	0.28	37	1.49
Hearing impairment	3	0.12	5	0.20	52	2.09
Orthopedic impairment	28	1.12	63	2.53	212	8.52
Absence or amputation	2	0.08	2	0.08	15	0.60
Psychosis & neurosis	3	0.12	4	0.16	33	1.33
Other personality disorders	7	0.28	7	0.28	26	1.04
Epilepsy	0	0.00	1	0.04	6	0.24
Cardiac & circulatory	9	0.36	18	0.72	86	3.46
Tuberculosis (pulmonary)	0	0.00	0	0.00	5	0.20
Hernia	0	0.00	0	0.00	3	0.12

(a) See Table 4.7. All percents refer to the proportion of the population reporting these impairments.

(b) Includes only those disabilities reported as "very severe" and "moderately severe."

(c) Includes "very severe," "moderately severe," and "mild" limitations.

(d) Includes all reported limitations for age eligible citizens of the total five community sample.

tions of any type. In addition, the values have been adjusted for age, age distribution within planning areas, and for variation among selected disability categories. *These adjusted values are the final estimates of gross selected disability categories from the present data.* In certain instances the incidence of rare characteristics prohibited estimating small subpopulations, i.e., planning areas. (In part this was because of the extremely low incidence rates obtained for the State value.) Therefore, incidence in these categories has been omitted, since, in addition to the above statement, some planning areas were reported to have no incidence of hernia, tuberculosis or other disabilities. In fact, the best possible estimates of these particular disabilities are the national values obtained from the health interview survey, part of the community survey data, the application of which appears to Tables 4.42 and 4.42a.

For all tables from 4.38 through 4.42a, the following items apply:

1. Only those persons likely to qualify for employment following services have been included—age 16 to 64 years.

2. Only those persons with some limitation have been included. This leaves open the question of low reporting of extent of limitation, especially in certain categories. For example respondents might be mentally retarded themselves. If so, they probably were unable to assess the degree to which the disabled were incapacitated. It is reasonable to conclude that some of those reported *as being "not limited" actually were quite limited.*

TABLE 4.32—Estimated Eligible Incidence by Planning Area, Community Survey Estimate Number One, 1967 to 1985 (severe limitations only) (a)

Planning area	*Year*(b)					
	1967(c)	*1968*	*1970*	*1975*	*1980*	*1985*
Abingdon	8,165	8,618	8,807	9,526	10,319	11,189
Roanoke	9,904	10,055	10,282	11,113	12,058	13,041
Charlottesville	9,374	9,526	9,752	10,508	11,416	12,361
South Boston	10,773	10,924	11,189	12,096	13,079	14,175
Alexandria	19,845	20,185	20,601	22,264	24,154	26,158
Richmond	18,031	18,333	18,711	20,223	21,962	23,776
Norfolk	24,456	24,872	25,402	27,443	29,786	32,243
Statewide	100,085	102,513	104,744	113,173	122,774	132,943

(a) See Table 4.7 for derivations of eligibility categories and percents. Severe limitations only (3.78% of the eligible population)

(b) See "Assumptions and Limitations," at the conclusion of this report. These data are questionable past 1975, especially if major program revisions or legislation leading to significant financial gain are in fact realized.

(c) These values were obtained by multiplying 3.78 percent by the eligible population.

TABLE 4.33—Estimated Eligible Incidence by Planning Area, Community Survey Estimate Number One, 1967 to 1985 (all disabilities)

Planning area	*Year*					
	1967(a)	*1968*	*1970*	*1975*	*1980*	*1985*
Abingdon	15,120	15,390	15,728	17,010	18,428	19,980
Roanoke	17,685	17,955	18,360	19,845	21,533	23,288
Charlottesville	16,740	17,010	17,415	18,765	20,385	22,073
South Boston	19,238	19,508	19,980	21,600	23,355	25,313
Alexandria	35,438	36,045	36,788	39,758	43,133	46,710
Richmond	32,196	32,738	33,413	36,113	39,218	42,456
Norfolk	43,673	44,415	45,360	49,005	53,190	57,578
Statewide	180,090	183,061	187,044	202,096	219,242	237,398

(a) Values presented: 6.75 percent times eligible population. This would include all disabilities except those not in any way limiting the person.

TABLE 4.34—Estimated Total Incidence by Planning Areas, All ages, 1970 Population(a)

Disability category	*Abingdon*		*Roanoke*		*Charlottesville*		*South Boston*		*Alexandria*		*Richmond*		*Norfolk*		*Statewide*	
	Planning areas(b)															
	%	*No.*(c)	%	*No.*	%	*No.*	%	*No.*	%	*No.*	%	*No.*	%	*No.*	%	*No.*
Visual impairment	3.9	15,678	1.2	5,628	1.2	5,328	2.8	14,280	1.2	11,268	2.8	23,884	1.8	20,862	2.3	109,848
Hearing impairment	3.8	15,276	1.6	7,504	1.6	7,104	1.9	9,690	1.1	10,329	1.9	16,207	2.3	26,657	2.2	105,072
Orthopedic impairment	9.5	38,190	6.3	29,547	6.3	27,972	6.7	34,170	5.8	54,462	6.7	57,151	9.1	105,469	7.6	362,976
Absence or amputation	0.7	2,814	0.3	1,407	0.3	1,332	0.4	2,040	0.2	1,878	0.4	3,412	0.4	4,636	0.4	19,104
Psychosis & neurosis	1.3	5,226	3.0	14,070	3.0	13,320	0.8	4,080	0.9	8,451	0.8	6,824	1.4	16,226	1.5	71,640
Other personality disorders	0.2	804	1.2	5,628	1.2	5,328	0.5	2,550	0.2	1,878	0.5	4,265	0.7	8,113	0.6	28,656
All 500s	1.5	6,030	4.2	19,698	4.2	18,648	1.4	7,140	1.1	10,329	1.4	11,942	2.4	27,816	2.2	105,072
Cardiac & circulatory	5.4	21,708	3.3	15,477	3.3	14,652	2.7	13,770	2.6	24,414	2.7	23,031	4.2	48,678	3.7	176,712
Epilepsy(c)	0.2	804	0.2	938	0.2	888	0.0	0	0.4	3,756	0.0	0	0.3	3,477	0.2	9,552
Tuberculosis (pulmonary) (c)	0.1	402	0.2	938	0.2	888	0.3	1,530	0.0	0	0.3	2,559	0.2	2,318	0.2	9,552
Hernia(c)	0.0	0	0.1	469	0.1	444	0.1	510	0.0	0	0.1	853	0.1	1,159	0.1	4,776
Other 600s	10.4	41,808	5.7	26,733	5.7	25,308	5.2	26,520	6.7	62,913	5.2	44,356	8.1	93,879	7.2	343,872
All 600s	16.2	65,124	9.8	45,962	9.8	43,512	8.3	42,330	9.7	91,083	8.3	70,799	12.9	149,511	11.4	544,464

(a) See Table 4.27.

(b) All percents were calculated for individual planning areas.

(c) In categories where the incidence percent was unusually small or zero, the incidence value obtained is of questionable validity.

TABLE 4.35—Estimated Eligible Incidence by Planning Areas, 1970 Population 16 to 64 Years (a),(b)

Disability category	*Planning areas*							
	Abingdon	*Roanoke*	*Charlottesville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Statewide*
Visual impairment	8,619	3,048	2,880	8,120	7,560	13,580	12,816	56,623
Hearing impairment	8,398	4,064	3,840	5,510	6,930	9,215	16,376	54,333
Orthopedic impairment	20,995	16,002	15,120	19,430	36,540	32,495	64,792	205,374
Absence or amputation	1,547	762	720	1,160	1,260	1,940	2,848	10,237
Psychosis & neurosis	2,873	7,620	7,200	2,320	5,670	3,880	9,968	39,531
Other personality disorders	442	3,048	2,880	1,450	1,260	2,425	4,984	16,489
All 500s	3,315	10,668	10,080	4,060	6,930	6,790	17,088	58,931
Cardiac & circulatory	11,934	8,382	7,920	7,830	16,380	13,095	29,904	95,445
Epilepsy	442	508	480	0	2,520	0	2,136	6,086
Tuberculosis (pulmonary)	221	508	480	870	0	1,455	1,424	4,958
Hernia	0	254	240	290	0	485	712	1,981
Other 600s	22,984	14,478	13,680	15,080	42,210	25,220	57,672	191,324
All 600s	35,802	24,892	23,520	24,070	61,110	40,255	91,848	301,497

(a) Procedure: (1) adjust for age (16-64 only), (2) adjust for planning area variance in age distribution (See Table 4.9), and (3) adjust for planning area variance by disability category (See Table 4.10).

(b) Assumption: If any extent of limitation qualifies the disabled, then these above are eligible.

TABLE 4.36—Estimated Eligible Incidence by Planning Areas, 1975 Population 16 to 64 Years(a),(b)

Disability category	*Planning areas* *Abingdon*	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Statewide*
Visual impairment	9,282	3,288	3,120	8,792	8,172	14,700	13,842	61,196
Hearing impairment	9,044	4,384	4,160	5,966	7,481	9,975	17,687	58,707
Orthopedic impairment	22,610	17,262	16,380	21,038	39,489	35,175	69,979	221,942
Absence or amputation	1,660	822	780	1,256	1,362	2,100	3,076	11,056
Psychosis & neurosis	3,094	8,220	7,800	2,512	6,129	4,200	10,766	42,721
Other personality disorders	476	3,288	3,120	1,570	1,362	2,625	5,383	17,824
All 500s	3,570	11,508	10,920	4,396	7,491	7,350	18,456	63,691
Cardiac & circulatory	12,852	9,042	8,580	8,478	17,706	14,175	32,298	103,131
Epilepsy	476	548	520	0	2,724	0	2,307	6,575
Tuberculosis (pulmonary)	238	548	520	942	0	1,575	1,538	5,361
Hernia	0	274	260	314	0	525	769	2,142
Other 600s	24,752	15,618	14,820	16,328	45,627	27,300	62,289	206,734
All 600s	38,556	26,852	25,480	26,062	66,057	43,575	99,201	325,783

(a) These data have been adjusted for age, population variance, and disability variance as in Table 4.11.

(b) Assumption: any extent of limitation qualifies the disabled; these are all, therefore, eligible.

TABLE 4.37—Percent Estimates of Selected Disability Category Incidence by Extent of Limitation (a), (b)

	Extent of limitation					
	"1"		*"2"*		*"3"*	
	1 + 2		*1 + 2 + 3*		*1 + 2 + 3 + 4*	
Disability category	*N*	*%(c)*	*N*	*%*	*N*	*%*
Visual impairment	5	13.5	7	18.9	37	100.0
Hearing impairment	3	5.8	5	9.6	52	100.0
Orthopedic impairment	28	13.2	63	29.7	212	100.0
Absence or amputation	2	13.3	2	13.3	15	100.0
Psychosis & neurosis	3	9.1	4	12.1	33	100.0
Other personality disorders	7	26.9	7	26.9	26	100.0
All 500s	10	16.9	11	18.6	59	100.0
Cardiac & circulatory	9	10.5	18	20.9	86	100.0
Epilepsy	0	0.0(d)	1	16.7	6	100.0
Tuberculosis (pulmonary)	0	0.0(d)	0	0.0(d)	5	100.0
Hernia	0	0.0(d)	0	0.0(d)	3	100.0
Other 600s	18	6.8	49	18.6	263	100.0
All 600s	27	9.7	50	18.1	277	100.0

(a) See Table 4.27.

(b) Assumption: Extent of limitation is a constant within disability categories (within planning areas).

(c) The percent is that proportion of the total number disabled in that category. Thus, 5/37 is the ratio of severe visual impairments to total visual impairments.

3. Population values for the seven planning areas have been adjusted to reflect the proportions of age eligible persons and the incidence values for the selected disability categories derived from the community survey data. Rather than apply the State or national values to these subdivisions, a much more acceptable method was to estimate each planning area in terms of its own characteristics.

4. By using the above procedures, the estimated number of eligible persons (disabilities) were calculated. In each table the number presented is an

TABLE 4.38—Estimated Incidence of Eligible, Potential, Vocational Rehabilitation Clients, 1970 Population 16 to 64 Years; Estimated Incidence of Cases Where Severe Limitation Would be Present(a)

Disability category	*Planning area*							
	Abingdon	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Statewide*
Visual impairment	1,228	441	418	1,119	883	1,871	1,633	7,593
Hearing impairment	514	252	239	326	348	545	896	3,120
Orthopedic impairment	2,922	2,262	2,146	2,619	4,173	4,378	8,072	26,572
Absence or amputation	217	109	103	157	145	263	356	1,350
Psychosis & neurosis	276	743	704	215	466	360	856	3,620
Other personality disorders	125	878	833	398	293	666	1,265	4,458
All 500s	591	1,931	1,831	700	1,013	1,171	2,726	9,963
Cardiac & circulatory	1,321	942	894	839	2,632	1,403	2,964	10,995
Epilepsy(a)	0	0	0	0	0	0	0	0
Tuberculosis (pulmonary) (a)	0	0	0	0	0	0	0	0
Hernia(a)	0	0	0	0	0	0	0	0
Other 600s	1,648	1,054	1,000	1,047	2,483	1,750	3,701	12,683
All 600s	3,661	2,586	2,453	2,383	5,128	3,985	8,409	28,605

(a) See Tables 4.42 and 4.43.

TABLE 4.39—Estimated Incidence of Eligible, Potential Vocational Rehabilitation Clients, 1975 Population, 16 to 64 Years; Estimated Incidence of Cases Where Severe Limitation Would be Present

Disability category	*Planning area*							
	Abingdon	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Statewide*
Visual impairment	1,327	476	450	121	954	2,022	1,764	7,114
Hearing impairment	555	273	258	353	376	590	968	3,373
Orthopedic impairment	3,160	2,445	2,312	2,830	4,509	4,732	8,721	28,709
Absence or amputation	235	117	111	170	157	285	386	1,461
Psychosis & neurosis	298	803	759	233	482	389	925	3,889
Other personality disorders	136	949	897	430	317	720	1,367	4,816
All 500s	639	2,087	1,973	757	1,095	1,266	2,945	10,762
Cardiac & circulatory	1,429	1,019	963	907	1,608	1,517	3,202	10,645
Epilepsy(a)	0	0	0	0	0	0	0	0
Tuberculosis (pulmonary) (a)	0	0	0	0	0	0	0	0
Hernia(a)	0	0	0	0	0	0	0	0
Other 600s	1,782	1,140	1,132	1,078	2,683	1,892	3,400	13,107
All 600s	3,960	2,795	2,643	2,576	5,542	4,307	9,084	30,907

(a) See Tables 4.42 and 4.43.

incidence value, and if some statement relative to numbers of persons to be served is needed, then additional adjustment must be undertaken to account for multiple disabilities. However, the purpose of this report is to present estimates and projections of incidence values.

Values reported in Tables 4.42 and 4.42a have been adjusted to account for population variance within planning areas, and national estimates for the incidence of rare characteristics such as "epilepsy," "tuberculosis (pulmonary)," as well as for the high incidence of mental retardation. However, the adjustment methodology in this instance does not result in refinement levels for these disability categories of the degree obtained for earlier reported values on other selected disability categories. Definitive statements with respect to extent of limitation cannot be justified. Little information is available to establish variance patterns among planning areas with respect to incidence of these rare characteristics. The data have been adjusted for age group differences and for planning area differences only.

Summary

Sources of Estimation Values. For the purpose of estimating incidence and prevalence of selected disabilities, several alternate sets of values can be applied to Statewide or local populations to obtain estimates of total and/or eligible incidence values, by age, population, etc. The present report examined these sources for comparison of estimates: (1) national estimates as presented in the findings from the National Health Survey publication *Chronic Conditions and Activity Limitation (1965)*, (2) estimates derived by an independent consulting firm (Harbridge House), (3) data obtained from the Virginia Department of Vocational Rehabilitation and the Virginia Commission for the Visually Handicapped, and (4) data collected during the course of the community surveys completed in five areas of the State.

The purposes of examining these sources were to establish which sets of data were the most reliable and which were most representative of the incidence values for selected disability categories in Virginia. It was hypothesized that certain areas of the State would appear quite different from other areas if analyses of data could observe these differences. The problems were, first, one of identification of the areas, and, second, one of identifying area differences. Within areas, the primary concern was to establish, in general, the incidence of selected disabilities and, in particular, the extent of limitation associated with the disabilities. The major task was to derive justifiable estimates for incidence of eligible disabilities within the seven planning areas of the State.

Eligibility Criteria. Although multiple standards are used to evaluate "Eligibility" for vocational rehabilitation services, the two most important criteria

TABLE 4.40—Estimated Incidence of Eligible, Potential Vocational Rehabilitation Clients, 1970 Population, 16 to 64 Years; Estimated Incidence of Cases Where Some Limitation Would be Present(a)

Disability category	*Planning area*							
	Abingdon	*Roanoke*	*Charlottesville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Statewide*
Visual impairment	1,717	617	585	1,566	1,236	2,120	2,286	10,627
Hearing impairment	850	418	396	540	576	903	1,484	5,167
Orthopedic impairment	6,574	5,089	4,827	5,890	9,388	9,850	18,162	59,780
Absence or amputation	217	108	103	157	145	263	358	1,351
Psychosis & neurosis	367	987	937	287	594	479	1,138	4,789
Other personality disorders	125	878	833	398	293	666	1,265	4,458
All 500s	650	2,125	2,015	771	1,115	1,289	3,000	10,965
Cardiac & circulatory	2,630	1,876	1,779	1,670	5,240	2,793	5,899	21,887
Epilepsy(a)	78	91	86	0	364	0	337	956
Tuberculosis (pulmonary) (a)	0	0	0	0	0	0	0	0
Hernia(a)	0	0	0	0	0	0	0	0
Other 600s	4,507	2,884	2,735	2,863	6,792	4,788	10,124	34,393
All 600s	6,832	4,825	4,576	4,447	9,569	7,436	15,691	53,376

(a) See Tables 4.42 and 4.43.

are age and extent of limitation. In past years the State agency restricted age-eligibility to approximately the range sixteen to sixty-four years. In recent months the lower limit has been reduced to fourteen years in some instances, especially in the school units. Data in the body of this report have been adjusted to provide incidence information for both lower limits of the age variable. It should be noted that the definition of eligibility using varying age limits produces considerable variance among estimates of incidence of any type; the numbers of chronic conditions change drastically at the upper limit (65) and the numbers of persons below sixteen years of age account for some 34 percent of the State's population. In either case incidence of any given category—total incidence or eligible incidence, all chronic conditions or specific disabilities—is very much a function of these age-group definitions of eligibility.

A second eligibility consideration is the extent of limitation associated with the disabling condition. In the preponderance of the disabilities identified in the community surveys no limitation was reported. *Therefore, the difference between the actual incidence of chronic conditions and severely limited persons is great.* A very low estimate of incidence is obtained when only these conditions *reported as severely* limiting are used as the bases for derivation of categorical incidence values. Perhaps more realistic is the incidence finding obtained when *any* limitation of the disabled is reported. Most likely, the true value lies somewhere between the two values severe limitations only, and all limitations. *Findings obtained from this study indicate that the true value for eligible incidence in Virginia, within the age and eligibility criteria, probably is greater than 100,000 and less than 180,000.* However, the importance of these gross estimates is questionable. Only when disability categories are observed by population and incidence variance among planning areas do the real incidence characteristics of the regions of the State begin to appear.

Interpretation of Incidence Estimates. Data reported in this context are of technical value for identification of regional incidence levels within categories. These data have been derived with careful attention being devoted to:

1. Population—planning areas of the State have been defined and the estimated populations have been calculated with special concern for trends in regional population difference.

2. Inter-racial differences—these differences occur within certain disability classes. However, as stated

TABLE 4.41—Estimated Incidence of Eligibile, Potential Vocational Rehabilitation Clients, 1975 Population, 16 to 64 Years; Estimated Incidence of Cases Where Some Limitation Would be Present

Disability category	*Planning area*							
	Abingdon	*Roanoke*	*Charlottesville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Statewide*
Visual impairment	1,857	667	631	1,693	1,336	2,831	2,470	11,485
Hearing impairment	919	452	427	584	622	976	1,603	5,583
Orthopedic impairment	7,110	5,501	5,202	6,368	10,146	10,646	19,622	64,595
Absence or amputation	235	117	111	170	157	285	386	1,461
Psychosis & neurosis	396	1,067	1,009	310	641	519	1,230	5,172
Other personality disorders	136	949	912	430	317	720	1,367	4,831
All 500s	703	2,297	2,172	833	1,205	1,393	3,241	11,844
Cardiac & circulatory	2,844	2,028	1,917	1,806	3,201	3,019	6,373	21,188
Epilepsy(a)	84	98	93	0	393	0	363	1,031
Tuberculosis (pulmonary) (a)	0	0	0	0	0	0	0	0
Hernia(a)	0	0	0	0	0	0	0	0
Other 600s	4,875	3,117	2,947	3,095	7,340	5,175	10,938	37,487
All 600s	7,389	5,215	4,931	4,807	10,341	8,037	16,951	57,671

(a) See Tables 4.42 and 4.43.

in the text, the points where the inconsistencies seem to exist are at disability categories where the non-whites are least likely to be aware of the chronic condition and, further, are most unlikely to be able to assess the extent of limitation with any accuracy. The main conclusion to draw from this finding is that a very definite need exists for the State to help the non-whites identify and treat chronic conditions, particularly within the "500's" category (mental, psychoneurotic, and other personality disorders).

3. Age variation—it is well understood that incidence in general will be far greater for old persons than for the young. Also, the old tend to have not only *more* chronic conditions and the conditions cluster around certain disabilities, many which are recognized as stemming from the aging process alone.

4. Age distributions by planning areas in Virginia seem to be divided into areas where age-differences among areas are quite prominent. The metropolitan areas of the State are "younger" in composition than are the rural and isolated areas. The areas including and surrounding the metropolitan concentrations contain more age-eligible persons.

5. Other demographic factors—the concentrations of persons, the socio-economic differences, racial patterns and numbers, types of occupations, how leisure time is spent make the seven planning areas different with respect to incidence findings. Not only do the total incidence values change by areas, but the values for given disabilities fluctuate considerably among areas. Incidence values for selected disabilities are not constant for the areas, and any estimates of incidence must use the relationships of incidence to population. Using these types of data alters the incidence picture considerably.

6. Severity of limitation—incidence values can be shown to change greatly depending on the extent to which one must be limited in order to qualify for

TABLE 4.42—Estimated Total Incidence of Selected Disability Categories, 1970 Population 16 to 64 Years, by Planning Areas Using National Estimates(a)

	Planning areas(c)								
Disability category	*National*(b) *estimate*	*Abingdon*	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Statewide*
	%	#	#	#	#	#	#	#	#
Mental retardation	3.1	6,851	7,874	7,440	8,990	19,530	15,035	22,072	87,792
Drug addiction	0.03	66	76	72	87	189	145	214	849
Tuberculosis (pulmonary)	0.2	442	508	480	580	1,260	970	1,424	5,664
Epilepsy	1.0	2,210	2,540	2,400	2,900	6,300	4,850	7,120	28,320
Alcoholism	2.6	5,746	6,600	6,240	7,540	16,380	12,610	18,512	73,628

TABLE 4.42a—Estimated Total Incidence of Selected Disability Categories, 1975 Population 16 to 64 Years, by Planning Areas Using National Estimates(a)

	Planning areas								
Disability category	*National*(b) *estimate*	*Abingdon*	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Statewide*
	%	#	#	#	#	#	#	#	#
Mental retardation	3.1	7,378	8,494	8,060	9,734	21,111	16,275	23,839	94,891
Drug addiction	0.03	71	82	78	94	204	158	231	918
Tuberculosis (pulmonary)	0.2	476	548	520	628	1,362	1,050	1,538	6,122
Epilepsy	1.0	2,380	2,740	2,600	3,140	6,810	5,250	7,690	30,610
Alcoholism	2.6	6,188	7,124	6,760	8,164	17,706	13,650	19,994	79,586

(a) See Table 4.29a for derivation of age eligible population estimates by planning areas.

(b) Source: *Facts on the Major Killing and Crippling Diseases in the United States Today*, New York: The National Health Education Committee, Inc., 866 United Nations Plaza, 1966 edition.

(c) Estimates of eligible numbers for these disability categories are difficult to validate. In part, this is due to the low incidence rate. It is reasonable to conclude that, in one way or another, the above chronic conditions are quite limiting and eligible incidence based on extent of limitation would be somewhat higher than the rates observed for other of the selected disability categories. Special care should be taken when attempting generalizations on drug addiction. This chronic condition is perhaps far from the true value in Virginia.

vocational rehabilitation services. Only minimum and maximum values are of utility, since, depending on how many persons or what type and what extent the limitation restricts the disabled, the number of persons served by the agency is really a function of many variables not specifically examined in this report. For example, if money and manpower were available, then many of those persons reported as being "slightly" limited could quite possibly be rehabilitated and could be placed in jobs more commensurate with their abilities. Or, a person who cannot attend regular education meetings due to some chronic condition might satisfy vocational rehabilitation eligibility standards if enough money were available, but at other times might be refused services because of inadequate financing at the time.

7. Summary—Virginia has many sufferers of chronic conditions for whom the State agencies could provide much needed services. *By any standards the agencies serve but a small fraction of these persons.* It would be quite reasonable to conclude that large sums of money and manpower are needed to even dent this "eligibility gap" which exists between incidence of chronic conditions and caseload served by the agency.

Assumptions and Limitations. Values reported in this study are of importance since little reliable data exists for estimating incidence of disability of any type for the State. Data included in the report are, however, subject to some critical examination due to the assumption accepted during derivation of relationships and due to the nature of the process by which the data was obtained. By identifying *possible* sources of error they can be taken into account in the implementation of later studies. As is well accepted by reliable researchers, the design of study is always subject to revision following the data analysis because information not previously available is of invaluable worth when contemplating subsequent data collection and analysis designs.

Following are some items of interest which were either actual assumptions in our research design or assumptions of other researchers in which we secured in collecting data we used for secondary analysis purposes. Population forecasts have been accepted almost without reservation for this study. However, the two sources used for Statewide and city and county population estimates differ somewhat by the year 1970. It is most difficult to ascertain a precise value for such a variable. This is really a crucial point because population is probably the best predictor of total incidence. Other factors certainly influence incidence of categorical disabilities, but without widely-differing values for population, incidence values remain fairly constant. Only when the population base for any disability changes does the relative value for different planning areas change markedly. In this study, population for the State and for planning areas has been assumed to remain as indicated in the sources used for estimates. *Obviously, any sudden shift in population will require adjustment of the incidence values.* These shifts could be simply numbers for the State; they could be numbers, racial concentrations, aging ratios, or other shifts. These assumptions are fundamental to the study. To attempt evaluation of these possibilities was far beyond the scope of the study design.

For population as stated above, the estimates for total incidence and for total eligible incidence probably are quite accurate. In other reports of this series different aspects of the sampling technique have been examined and have been shown to have produced approximations of the parameters for the State. Namely, age-groups for the present study have been shown to approximate very closely the State values as estimated by other sources. Also, the fact that the racial difference obtained for the study differed as compared to that known for the State is certainly a plus for the sampling design, for had the Negro ratio to white been the State average, it would have been obvious that the sampling procedure had not sampled the areas surveyed since these areas did *not* have the State ratio for races. Therefore it could be assumed that the sampling design did in fact sample chronic conditions which are present in Virginia. It would not be reasonable to conclude that some incidental variables were accurately extracted while those explicitly defined as study questions should have gone undetected by the process.

Within given disability categories the picture is by no means as clear, for several factors operated systematically to detract from the reliability of the data. First, there appears to have been some biasing error in the reporting of certain incidence values for Negroes. Second, the application of incidence values to "similar" areas of the State that were not actually sampled might add error to the State values, but would, obviously not detract from observed incidence values in areas sampled. Third, the difference between the reported national estimate for all incidence categories and that reported from the findings of the present study seems to indicate that less than the expected total incidence value was obtained by the methodology of the present study. However, the estimate for eligible incidence closely approximates that quoted by the national agency, and this certainly lends credence to the data. *It has been assumed that the methodology of the present study would have identified all the disabled among those sampled, while in fact a much more stringent process would probably have produced much higher incidence values.* For example, if funding were no problem, a team of medical experts could examine each household for incidence of chronic conditions and extent of limitations.

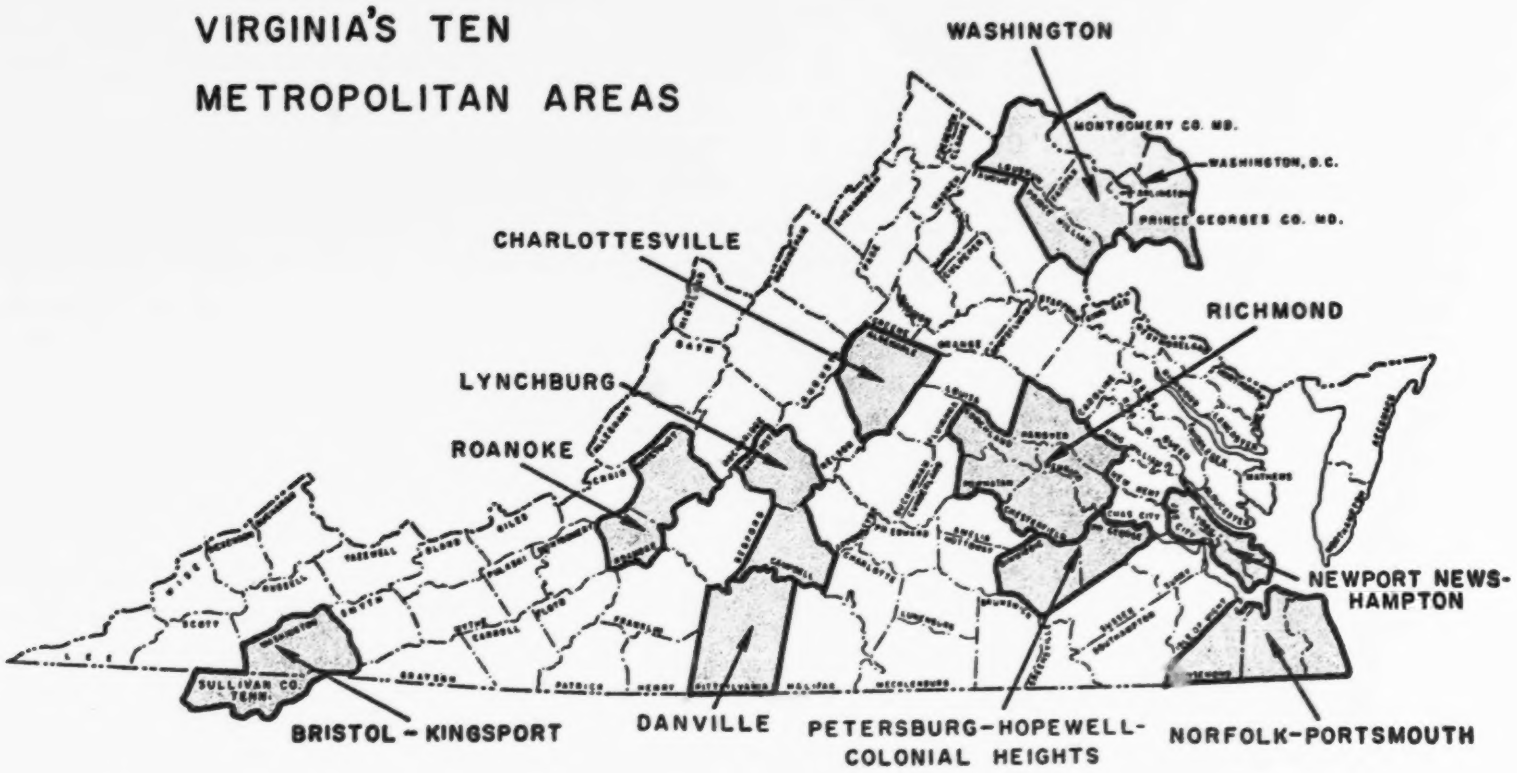
Finally, natural catastrophies and social changes could add significant number of persons to the disabled rosters of the areas. Such events include large-scale involvement in military action, a shift to the South for low-cost sources of employment, interstate highway systems that would induce significant inland mobility of both industry and significant proportions of the State population, changing economic structures of the State that would eliminate much manual labor through automation, etc. To locate further sites where these sources of incidence variation might appear would be conjecture, but they could exert a tremendous influence on incidence values for the years projected in this report. It has been assumed that the State as a whole and the planning areas in particular would remain in the same ratio with respect to population gain, racial balance, age-group numbers, etc.

Finally, perhaps one of the most significant influences on the eligible who are *available* and *willing* to receive services from the rehabilitation agencies is the number of persons who know of the opportunities associated with vocational rehabilitation. Only when these persons have been contacted and are introduced to the referral system do the incidence estimates become important. If all of those eligible individuals were contacted and convinced that vocational rehabilitation services could improve their lives, then the numbers of persons moving through the rehabilitation process would rise significantly.

Appendix I
Population Trends in Virginia's Metropolitan Areas

Source: "Projections to 1980 for Virginia
Metropolitan Areas"

Virginia Division of State Planning
and Community Affairs


VIRGINIA'S TEN
METROPOLITAN AREAS
WASHINGTON
MONTGOMERY CO. MD.
WASHINGTON, D.C.
PRINCE GEORGES CO. MD.
CHARLOTTESVILLE
RICHMOND
LYNCHBURG
ROANOKE
NEWPORT NEWS-HAMPTON
SULLIVAN CO. TENN.
BRISTOL - KINGSPORT
DANVILLE
PETERSBURG-HOPEWELL-COLONIAL HEIGHTS
NORFOLK-PORTSMOUTH

Definition of the Ten Metropolitan Areas

This report concerns Virginia's ten metropolitan areas. These areas are listed alphabetically as follows:

1. *Bristol-Kingsport Metropolitan Area*—The City of Bristol, Virginia, and the counties of Washington, Virginia and Sullivan, Tennessee. (Kingsport and Bristol, Tennessee are part of Sullivan County.)

2. *Washington Metropolitan Area*—The District of Columbia; the Virginia cities of Alexandria, Fairfax, and Falls Church and the Virginia counties of Fairfax, Loudoun, and Prince William; and the Maryland counties of Montgomery and Prince George.

3. *Charlottesville Metropolitan Area*—The City of Charlottesville and the County of Albemarle.

4. *Danville Metropolitan Area*—The City of Danville and the County of Pittsylvania.

5. *Lynchburg Metropolitan Area*—The City of Lynchburg and the counties of Amherst and Campbell.

6. *Newport News-Hampton Metropolitan Area*—The cities of Newport News, Hampton, and Williamsburg and the counties of James City and York.

7. *Norfolk-Portsmouth Metropolitan Area*—The cities of Norfolk, Portsmouth, Chesapeake, Suffolk, and Virginia Beach and the County of Nansemond.

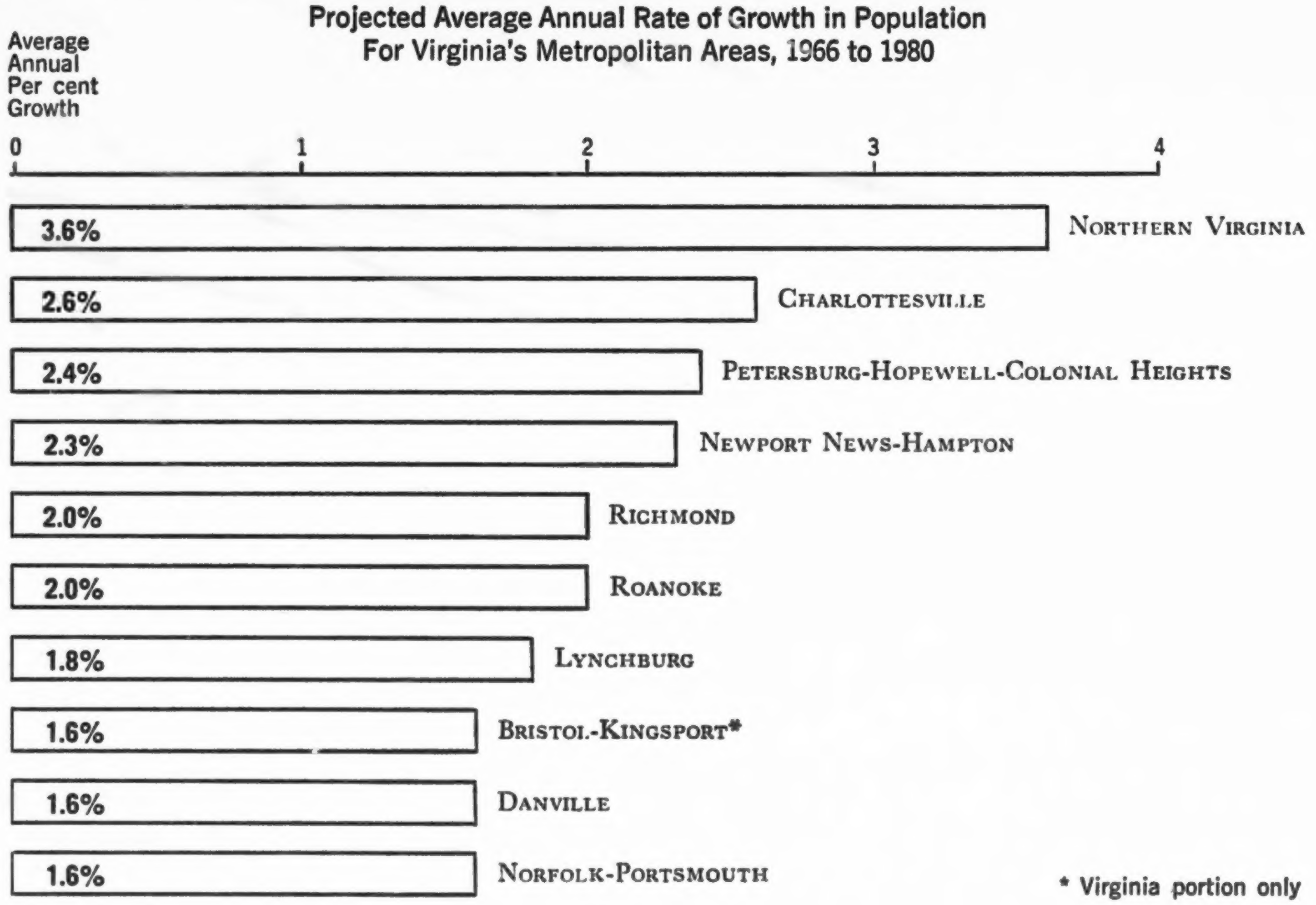
8. *Petersburg-Hopewell-Colonial Heights Metropolitan Area*—The cities of Petersburg, Hopewell, and Colonial Heights and the counties of Dinwiddie and Prince George.

9. *Richmond Metropolitan Area*—The City of Richmond and the counties of Chesterfield, Goochland, Hanover, Henrico, and Powhatan.

10. *Roanoke Metropolitan Area*—The City of Roanoke and the counties of Botetourt and Roanoke.

These areas are more numerous than the Bureau of the Census' familiar Standard Metropolitan Statistical Areas (SMSA's) of which there are now six recognized in Virginia. Our reason for not using the exact SMSA criteria was that we wished to recognize areas which would later be added to existing SMSA's and to identify other metropolitan areas which although not now SMSA's would be so designated on or before 1980.

Projected Average Annual Rate of Growth in Population For Virginia's Metropolitan Areas, 1966 to 1980



* Virginia portion only

POPULATION GROWTH OF VIRGINIA METROPOLITAN AREAS, 1950-66 AND 1966-80

Virginia metropolitan areas	*1950-66* *Average annual percentage growth rate*	*Rank*	*1966-80* *Average annual percentage growth rate*	*Rank*
Northern Virginia	5.4	1	3.6	1
Charlottesville	2.2	4½	2.6	2
Petersburg	2.0	6	2.4	3
Newport News-Hampton	3.6	2	2.3	4
Richmond	2.2	4½	2.0	5½
Roanoke	1.7	7	2.0	5½
Lynchburg	1.4	8	1.8	7
Bristol-Kingsport (Virginia portion)	0.5	10	1.6	9
Danville	0.7	9	1.6	9
Norfolk-Portsmouth	2.4	3	1.6	9

The growth rate of non-metropolitan areas is projected at only 0.1 percent annually from 1966 to 1980, compared with 0.4 percent from 1950 to 1966. These low growth rates result from a large number of net out-migrants and lower crude birth rates due to the outflow of women of childbearing age.

1980 POPULATION OF VIRGINIA AND ITS SIX METROPOLITAN AREAS

Geographic Area	*1966*	*1980*
State	4,535,961	5,785,200
Six metropolitan areas	2,557,256	3,876,900
Six areas as proportion of total state	56.3	67.0
LYNCHBURG	122,786	198,000
Lynchburg City	57,050	63,000
Amherst County	25,526	35,000
Campbell County	40,210	62,000
Bedford County	—	38,000
ROANOKE	179,588	240,000
Roanoke City	102,321	108,500
Roanoke County	77,267	131,500
NEWPORT NEWS-HAMPTON	276,327	428,000
Hampton City	115,615	175,200
Newport News City	131,624	167,000
York County	29,088	47,900
Williamsburg City	—	15,400
James City County	—	22,500
RICHMOND	502,407	766,200
Richmond City	217,671	218,200
Henrico County	151,714	217,000
Hanover County	33,994	58,000
Chesterfield	99,028	190,000
Petersburg City	—	39,100
Colonial Heights City	—	18,900
Hopewell City	—	25,000
NORFOLK-PORTSMOUTH	662,614	908,600
Virginia Beach	131,860	244,800
Chesapeake	91,441	132,900
Norfolk	322,030	346,500
Portsmouth	117,283	121,900
Suffolk City	—	12,000
Nansemond County	—	50,500
NORTHERN VIRGINIA	813,531	1,336,100
Fairfax City	21,769	36,800
Falls Church	11,190	12,500
Alexandria	110,430	164,200
Arlington County	187,936	215,600
Fairfax County	366,949	640,800
Loudoun County	30,349	76,200
Prince William County	84,389	190,000

NOTE: The cities and counties comprising the 1980 metropolitan areas were selected by Economic Associates, Inc.

SOURCES: 1960 Census of Population; 1966—University of Virginia, Bureau of Population and Economic Research; 1980—State Population from the Division of State Planning and Community Affairs; Metropolitan Areas Population from Economic Associates, Inc.

Appendix II

Community Survey Questions Relating to Disabilities

Questions about Disabilities

1. Does any member of your family have serious trouble seeing, even when wearing glasses?

2. Does any member of your family have deafness or serious trouble with hearing?

3. Does any member of your family suffer from permanent stiffness or deformity of the foot, leg, fingers, arm, back, or any other part of the body?

4. Does any member of your family have repeated trouble with his back or spine?

5. Does any member of your family have paralysis of any kind or have poor use of his legs, arms, feet, hands, or fingers?

6. Is any member of your family missing an arm, foot, leg, fingers, or toes?

7. Does any member of your family suffer from epilepsy or other types of seizures or fits?

8. Has any member of your family ever been diagnosed as having a heart condition?

9. Does any member of your family have tuberculosis, serious trouble breathing, or a long history of a daily cough?

10. Does any member of your family have a serious speech defect, that is, serious trouble speaking?

11. Does any member of your family have serious trouble with his stomach or with digesting food?

12. Has any member of your family suffered from alcoholism?

13. Has any member of your family suffered from any mental problems or been under the care of a psychiatrist?

14. Does any member of your family have a condition present since birth or anything else wrong with him that we have not asked about?

Extent of limitation. If the person replied in the affirmative, the interviewer was instructed to ascertain the *extent of limitation* attributed to the disability reported. To insure relative uniformity within the group of interviewers, all persons answering that they had some disability were asked if they were:

1. Confined to the house except for emergencies?

2. Able to go outside alone, but has trouble in getting around outside?

3. Able to go outside alone, but has trouble in getting around freely?

4. Not limited in any of the above ways?

If 1, 2, or 3 was "yes," the person recording the response asked the respondent to explain fully the problem.

Source: Community Survey Questionnaire, Vocational Rehabilitation Study
Institute of Government, University of Virginia.

Appendix III

Data About Incidence

Section I — General Estimates of Incidence Statewide Using Several Alternate Methods

Table A-1—Estimated Total Incidence and Eligible Incidence Using National Estimates for 1967 to 1985

Year	*Total population*	*No. chronic condition or impairment*(a)	*No. total disabled and limited*(b)	*Number eligible disabled*(c)
1967	4,601,000	2,029,041	561,322	87,419
1968	4,679,000	2,063,000	570,838	88,901
1969	4,767,000	2,102,000	581,574	90,573
1970	4,848,000	2,138,000	591,456	92,112
1975	5,161,000	2,276,000	692,642	98,059
1980	5,599,000	2,469,000	683,078	106,381
1985	6,064,000	2,674,000	739,808	115,216

(a) *Rationale:* 44.1 percent of the estimated population (some impairment)

(b) Rationale: 12.2 percent of the estimated population (limited to some degree)

(c) VRA estimate (3.7 times 10^6 of X10^6 persons)

Source: *Chronic Conditions and Activity Limitation.* U.S. Department of H.E.W., Public Health Service, National Center for Health Statistics Series 10, No. 17, Washington, D.C., May 1965.

Table A-2—Statewide Incidence Estimates of Selected Disability Categories Using Five Sources of Percent Values.

Selected disability categories	*National*(a) *estimates*	*Independent*(c) *consultant*	*Dishart's study*	*Virginia DVR records*(c)	*Community survey findings*	
					A(a)	*B*(b)
Visual impairments	1.8	4.9	9.2	3.1	2.1	8.7
Hearing impairments	10.0	3.2	5.1	2.7	2.2	8.5
Orthopedic impairments	—	19.1	23.4	21.3	7.6	29.3
Absence or amputation	—	—	4.2	2.6	0.4	1.6
Psychosis or neurosis	10.0	12.2	11.0	5.9	1.5	5.8
Other 500s	—	—	—	7.3	0.6	2.3
Mental retardation	3.1	26.0	7.1	14.7	—	—
Cardiac & circulatory	—	20.3	6.7	6.3	3.7	14.3
Epilepsy	1.0	7.1	2.2	—	0.2	0.8
Tuberculosis (pulmonary)	0.03	5.9	3.3	—	0.2	0.7
Hernia	—	—	2.0	—	0.1	0.3
Other 600s	—	—	20.9	—	11.4	27.8

(a) The percent of the sample with this chronic condition of limitation

(b) The percent of the reported total number of disabilities.

(c) See Table 4.2 for a more detailed analysis of fiscal year 1967 agency activity.

(d) See Table 4.1.

TABLE A-3—Incidence of Acute Conditions, Percent Distribution, and Number of Acute Conditions per 100 Persons per Year, by Sex and Condition Group: United States, July 1966-June 1967

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in Appendix II]

Condition group	*Both Sexes*	*Male*	*Female*	*Both Sexes*	*Male*	*Female*	*Both Sexes*	*Male*	*Female*
	Incidence of acute conditions in thousands			*Percent distribution*			*Number of acute conditions per 100 persons per year*		
All Acute Conditions	365,936	172,082	193,854	100.0	100.0	100.0	190.2	185.4	194.7
Infective and parasitic diseases	45,526	21,208	24,318	12.4	12.3	12.5	23.7	22.9	24.4
Common Childhood Diseases	9,918	5,230	4,688	2.7	3.0	2.4	5.2	5.6	4.7
The virus, n.o.s.	26,249	11,467	14,782	7.2	6.7	7.6	13.6	12.4	14.6
Other infective and parasitic diseases	9,359	4,511	4,848	2.6	2.6	2.5	4.9	4.9	4.9
Respiratory Conditions	201,016	93,314	107,702	54.9	54.2	55.6	104.5	100.6	108.2
Upper respiratory conditions	138,939	64,762	74,177	38.0	37.6	38.3	72.2	69.8	74.5
Common cold	109,713	51,572	58,140	30.0	30.0	30.0	57.0	55.6	58.4
Other acute upper respiratory conditions	29,227	13,190	16,037	8.0	7.7	8.3	15.2	14.2	16.1
Influenza	55,382	25,098	30,284	15.1	14.6	15.6	28.8	27.0	30.4
Influenza with digestive manifestations	10,524	4,632	5,892	2.9	2.7	3.0	5.5	5.0	5.9
Other influenza	44,858	20,466	24,392	12.3	11.9	12.6	23.3	22.1	24.5
Other respiratory conditions	6,695	3,454	3,240	1.8	2.0	1.7	3.5	3.7	3.3
Pneumonia	2,013	1,232	782	0.6	0.7	0.4	1.0	1.3	0.8
Bronchitis	3,411	1,491	1,920	0.9	0.9	1.0	1.8	1.6	1.9
Other acute respiratory conditions	1,270	731	*	0.3	0.4	*	0.7	0.8	*
Digestive system conditions	17,292	8,244	9,048	4.7	4.8	4.7	9.0	8.9	9.1
Dental conditions	5,951	2,843	3,108	1.6	1.7	1.6	3.1	3.1	3.1
Functional and symptomatic upper gastrointestinal disorders, n.e.c.	3,847	1,601	2,246	1.1	0.9	1.2	2.0	1.7	2.3
Other digestive system conditions	7,494	3,801	3,694	2.0	2.2	1.9	3.9	4.1	3.7
Injuries	54,127	31,516	22,611	14.8	18.3	11.7	28.1	34.0	22.7
Fractures, dislocations, sprains, and strains	15,298	8,447	6,851	4.2	4.9	3.5	8.0	9.1	6.9
Fractures and dislocations	5,768	3,150	2,618	1.6	1.8	1.4	3.0	3.4	2.6
Sprains and strains	9,530	5,297	4,233	2.6	3.1	2.2	5.0	5.7	4.3
Open wounds and lacerations	16,657	10,421	6,236	4.6	6.1	3.2	8.7	11.2	6.3
Contusions and superficial injuries	9,500	4,885	4,615	2.6	2.8	2.4	4.9	5.3	4.6
Other current injuries	12,672	7,764	4,908	3.5	4.5	2.5	6.6	8.4	4.9
All other acute conditions	47,975	17,799	30,176	13.1	10.3	15.6	24.9	19.2	30.3
Diseases of the ear	10,003	5,082	4,921	2.7	3.0	2.5	5.2	5.5	4.9
Headaches	4,520	1,671	2,849	1.2	1.0	1.5	2.3	1.8	2.9
Genito-urinary disorders	6,520	740	5,780	1.8	0.4	3.0	3.4	0.8	5.8
Deliveries and disorders of pregnancy and the puerperium	3,800	—	3,800	1.0	—	2.0	2.0	—	3.8
Diseases of the skin	5,236	2,764	2,471	1.4	1.6	1.3	2.7	3.0	2.5
Diseases of the musculoskeletal system	3,783	1,722	2,062	1.0	1.0	1.1	2.0	1.9	2.1
All other acute conditions	14,113	5,820	8,293	3.9	3.4	4.3	7.3	6.3	8.3

NOTE: Excluded from these statistics are all conditions involving neither restricted activity nor medical attention.
n.o.s.—not otherwise specified; n.e.c.—not elsewhere classified.

SOURCE: *Current Estimates,* U.S. Department of Health, Education, and Welfare, Washington, D.C., January, 1968.

TABLE A-4—Estimated Total Incidence by Planning Areas, 1967-1985, National Estimate(a) (in thousands)

Planning area	*Year*(b)					
	1967	*1968*	*1970*	*1975*	*1980*	*1985*
Abingdon	170	173	177	191	208	225
Roanoke	199	202	207	223	243	262
Charlottesville	189	192	196	212	230	249
South Boston	217	220	225	243	263	285
Alexandria	399	406	414	448	486	526
Richmond	363	369	376	407	441	478
Norfolk	492	501	511	552	552	599
Statewide	2,029	2,063	2,106	2,276	2,423	2,624

(a) Based on the estimated 44.1 percent who were identified as having one chronic condition or impairment. The numbers are rounded.

(b) Values under this heading were obtained using the estimated planning area populations.

(c) To convert total incidence into persons disabled divide *gross total* incidence by 2: See *Chronic Conditions and Activity Limitations,* U.S., H.E.W., 1965.

TABLE A-5—Estimated Total Incidence by Planning Areas, 1967 to 1985, Using Community Survey Findings for Total Incidence (in thousands) (a)

Planning area	*Year*					
	1967	*1968*	*1970*	*1975*(b)	*1980*(b)	*1985*(b)
Abingdon	101	102	105	113	122	133
Roanoke	118	119	122	132	143	155
Charlottesville	111	113	115	125	135	147
South Boston	128	130	133	143	155	168
Alexandria	235	239	244	264	286	310
Richmond	214	217	222	240	260	282
Norfolk	290	295	301	326	353	382
Statewide	1,197	1,215	1,242	1,343	1,454	1,577

(a) Based on the calculated value of 26 percent in the five community surveys conducted by the research staff. The numbers are rounded.

(b) See "Assumptions and Limitations," at the conclusion of the report.

TABLE A-6—Estimated Eligible Incidence by Planning Areas, National Estimate, 1967 to 1985(a)

Planning area	*Year*(b)					
	1967	*1968*	*1970*	*1975*	*1980*	*1985*
Abingdon	7,353	7,467	7,638	8,246	8,949	9,690
Roanoke	8,588	8,721	8,911	9,633	10,450	11,305
Charlottesville	8,132	8,265	8,436	9,120	9,899	10,716
South Boston	9,329	9,481	9,690	10,469	11,343	12,293
Alexandria	17,195	17,480	17,841	19,285	20,919	22,667
Richmond	15,618	15,884	16,207	17,518	19,019	20,596
Norfolk	21,204	21,565	22,021	23,788	25,802	27,949
Statewide	87,419	88,863	90,744	98,063	106,381	115,216

(a) The national estimate of 1.9 percent of the total population was used to calculate these values. The numbers are rounded.

(b) Obviously, the magnitude of the eligible population of needy, disabled persons is subject to wide variation with respect to eligibility requirements, vocational rehabilitation program effectiveness, and the precision and scope of identification of the disabled.

Section II — Estimates of Selected Disability Categories Within Planning Areas Using 1970 and 1975, Where Various Methods of Estimation Have Been Employed

TABLE A-7—Estimated Eligible Incidence by Planning Areas, by Selected Disability Categories; Severe Limitations Only, 1970 Population 16 to 64 Years (a).
(58 percent eligible in all areas)

Disability category	*State % (b)*	*Planning areas*							
		Abingdon	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	0.20	466	544	516	592	1,090	990	1,344	5.542
Hearing impairment	0.12	280	326	310	255	654	594	806	3,325
Orthopedic impairment	1.12	2,610	3,046	2,890	3,315	6,104	5,544	7,526	31,035
Absence or amputation	0.08	186	218	206	237	436	396	538	2,217
All 500's	0.40	932	1,088	1,032	1,184	2,180	1,980	2,688	11,084
Psychosis & neurosis	0.12	280	326	310	355	654	594	806	3,325
Other 500's	0.28	652	762	722	829	1,526	1,386	1,882	7,759
All 600's	1.08	2,516	2,938	2,786	3,197	5,886	5,346	7,258	29,927
Epilepsy		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Cardiac & circulatory	0.36	839	979	929	1,066	1,962	1,782	2,419	9,976
Tuberculosis (pulmonary)		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Hernia		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Total	3.78								

(a) See Table 4.29 and 4.29a for estimates of eligible population by planning areas.
(b) See Table 4.3 for the derivation of these values.
(c) Data insufficient to use for estimation purposes.

TABLE A-8—Estimated Eligible Incidence by Planning Areas by Selected Disability Categories; Severe Limitations Only, 1975 Population 16 to 64 Years (a).
(Fifty Percent eligible in all areas)

Disability category	*State % (b)*	*Planning areas*							
		Abingdon	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	0.20	504	588	556	640	1,178	1,070	1,452	5,988
Hearing impairment	0.12	302	353	334	384	707	642	871	3,593
Orthopedic impairment	1.12	2,822	3,293	3,114	3,584	6,597	5,992	8,131	33,533
Absence or amputation	0.08	202	235	222	256	471	428	581	2,395
All 500's	0.40	1,008	1,176	1,112	1,280	2,356	2,140	2,904	11,976
Psychosis & neurosis	0.12	302	353	334	384	707	642	871	3,593
Other 500's	0.78	706	823	778	896	1,649	1,498	2,031	8,381
All 600's	1.08	2,722	3,175	3,002	3,456	6.361	5,778	7,841	32,335
Epilepsy		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Cardiac & circulatory	0.36	907	1,058	1,001	1,152	2,120	1,926	2,614	10,778
Tuberculosis (pulmonary)		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Hernia		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Total	3.78								

(a) See Tables 4.29 and 4.29a
(b) See Table 4.31
(c) Insufficient data for estimation purposes.

TABLE A-9—Estimated Eligible Incidence by Planning Areas by Selected Disability Categories; Severe Limitations Only, 1970 Population 16 to 64 Years
(Populations Used as the Base Are Those Derived for Table 4.29a)

Disability category	*State %*	*Planning areas*							
		Abingdon	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	0.20	442	508	480	580	1,260	970	1,424	5,664
Hearing impairment	0.12	265	305	288	348	756	582	854	3,498
Orthopedic impairment	1.12	2,475	2,845	2,688	3,248	7,056	5,432	7,974	31,718
Absence or amputation	0.08	177	203	192	232	504	388	510	2,266
All 500's	0.40	884	1,016	960	1,160	2,520	1,940	2,848	11,328
Psychosis & neurosis	0.12	265	305	288	348	756	582	854	3,498
Other 500's	0.28	619	711	672	812	1,764	1,358	1,994	7,930
All 600's	1.08	2,387	2,743	2,592	3,132	6,804	5,238	7,690	30,586
Epilepsy	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Cardiac & circulatory	0.36	796	914	864	1,044	2,268	1,746	2,563	10,195
Tuberculosis (pulmonary)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Hernia	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Total	7.78								

(a) Insufficient data for estimation purposes.

TABLE A-10—Estimated Eligible Incidence by Planning Areas by Selected Disability Categories; Severe Limitations Only, 1975 Population 16 to 64 Years
(Populations Used as the Base Are Those Derived for Table 4.29a)

Disability category	*State %*	*Planning areas*							
		Abingdon	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	0.20	476	548	520	628	1,362	1,050	1,538	6,122
Hearing impairment	0.12	285	329	312	377	817	630	923	3,673
Orthopedic impairment	1.12	2,666	3,069	2,912	3,517	7,627	5,880	8,613	34,284
Absence or amputation	0.08	190	219	208	251	545	420	615	2,448
All 500's	0.40	952	1,096	1,040	1,256	2,724	2,100	3,076	12,244
Psychosis & neurosis	0.12	285	329	312	377	817	630	923	3,673
Other 500's	0.28	666	767	728	879	1,907	1,470	2,153	8,570
Epilepsy	0.08	2,570	2,959	2,808	3,391	7,355	5,670	8,305	33,058
All 600's		—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Cardiac & circulatory	0.36	857	986	936	1,130	2,452	2,457	2,768	11,586
Tuberculosis (pulmonary)		—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Hernia		—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Total	3.78								

(a) Insufficient data for estimation purposes.

Table A-11—Estimated Eligible Incidence by Planning Areas by Selected Disability Categories; All Limitations, 1970 Population 16 to 64 Years(a)
(Fifty-eight percent eligible in all areas)

		Planning areas							
Disability category	*State % (b)*	*Abingdon*	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	0.28	652	763	722	829	1,526	1,386	1,882	7,760
Hearing impairment	0.20	466	544	516	592	1,090	990	1,344	5,542
Orthopedic impairment	2.53	5,895	6,882	6,527	7,489	13,789	12,524	17,002	70,108
Absence or amputation	0.08	186	218	206	237	436	396	538	2,217
All 500's	0.44	1,025	1,197	1,135	1,302	2,398	2,178	2,957	12,192
Psychosis & neurosis	0.16	373	435	413	474	872	792	1,075	4,434
Other 500's	0.28	652	762	722	829	1,526	1,386	1,882	7,759
All 600's	2.01	4,683	5,467	5,186	5,950	10,955	9,950	13,607	55,698
Epilepsy		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Cardiac & circulatory	0.72	1,678	1,958	1,858	2,131	3,924	3,564	4,838	19,951
Tuberculosis (pulmonary)		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Hernia		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Total	6.75								

(a) See Tables 4.29 and 4.29a
(b) See Table 4.31
(c) Insufficient data for estimation purposes.

Table A-12—Estimated Eligible Incidence by Planning Areas by Selected Disability Categories; All Limitations, 1975 Population 16 to 64 Years
(Fifty-eight percent eligible in all areas) (a)

		Planning areas							
Disability category	*State % (b)*	*Abingdon*	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	0.28	706	823	778	896	1,649	1,498	2,033	8,383
Hearing impairment	0.20	504	588	556	640	1,178	1,070	1,452	5,988
Orthopedic impairment	2.53	6,376	7,438	7,033	8,096	14,902	13,535	18,368	75,748
Absence or amputation	0.08	202	235	222	256	471	428	581	2,395
All 500's	0.44	1,109	1,294	1,223	1,408	2,592	2,354	3,194	13,174
Psychosis & neurosis	0.16	403	470	445	512	942	856	1,162	4,790
Other 500's	0.28	706	823	778	896	1,649	1,498	2,033	8,383
All 600's	2.01	5,065	5,909	5,588	6,432	11,839	10,754	14,593	60,180
Epilepsy		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Cardiac & circulatory	0.72	1,814	2,117	2,002	2,304	4,241	3,852	5,227	21,557
Tuberculosis (pulmonary)		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Hernia		—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)	—(c)
Total	6.75								

(a) See Tables 4.29 and 4.29a
(b) See Table 4.31
(c) Insufficient data for estimation purposes.

TABLE A-13—Estimated Eligible Incidence by Planning Areas by Selected Disability Categories; All Limitations, 1970 Population 16 to 64 Years

(Populations used are those derived for Table 4.29a)

Disability category	*State %*	*Planning areas*							
		Abingdon	*Roanoke*	*Charlottesville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	0.28	619	711	672	812	1,764	1,358	1,994	7,930
Hearing impairment	0.20	442	508	480	580	1,260	970	1,424	5,664
Orthopedic impairment	2.53	5,591	6,426	6,072	7,337	15,939	12,271	18,014	71,650
Absence or amputation	0.08	177	203	192	232	504	388	570	2,266
All 500's	0.44	972	1,118	1,056	1,276	2,772	2,134	3,133	12,461
Psychosis & neurosis	0.16	354	406	384	464	1,008	776	1,139	4,531
Other 500's	0.28	619	711	672	812	1,764	1,358	1,994	7,930
All 600's	2.01	4,442	5,105	4,824	5,829	12,663	9,749	14,311	56,923
Epilepsy		—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Cardiac & circulatory	0.72	1,591	1,829	1,728	2,088	4,536	3,492	5,126	20,390
Tuberculosis (pulmonary)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Hernia	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Total	6.75								

(a) Insufficient data for estimation purposes.

TABLE A-14—Estimated Eligible Incidence by Planning Areas by Selected Disability Categories; All Limitations, 1975 Population 16 to 64 Years

(Populations used are those derived for Table 4.29a)

Disability category	*State %*	*Planning areas*							
		Abingdon	*Roanoke*	*Charlottesville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	0.28	666	767	728	879	1,907	1,470	2,153	8,570
Hearing impairment	0.20	476	548	520	628	1,362	1,050	1,538	6,122
Orthopedic impairment	2.53	6,021	6,932	6,578	7,944	17,229	13,283	19,456	77,443
Absence or amputation	0.08	190	219	208	251	545	420	615	2,448
All 500s	0.44	1,047	1,206	1,144	1,382	2,996	2,310	3,387	13,472
Psychosis & neurosis	0.16	381	438	416	502	1,090	840	1,230	4,897
Other 500s	0.28	666	767	728	879	1,907	1,470	2,153	8,570
All 600s	2.01	4,784	5,507	5,226	6,311	13,688	10,553	15,456	61,525
Epilepsy		—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Cardiac & circulatory	0.72	1,714	1,973	1,872	2,261	4,903	3,780	5,537	22,040
Tuberculosis (pulmonary)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Hernia	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)	—(a)
Total	6.75								

(a) Insufficient data for estimation purposes.

TABLE A-15—Estimated Total Incidence by Planning Areas, Age Eligible (16 to 64 Years) 1970 Population Percents as on Table 4.34(a),(b)

	Planning areas							
Disability category	*Abingdon*	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	9,087	3,264	3,096	8,288	6,540	13,860	12,096	56,231
Hearing impairment	8,854	4,352	4,128	5,624	5,995	9,405	15,456	53,814
Orthopedic impairment	22,135	17,136	16,254	19,832	31,610	33,165	61,152	201,284
Absence or amputation	1,631	816	774	1,184	1,090	1,980	2,688	10,163
Psychosis and neurosis	3,029	8,160	7,740	2,368	4,905	3,960	9,408	39,570
Other personality disorders	466	3,264	3,096	1,480	1,090	2,475	4,704	16,575
All 500s	3,495	11,424	10,836	4,144	5,995	6,930	16,128	58,952
Cardiac & circulatory	12,582	8,976	8,514	7,992	25,070	13,365	28,224	104,723
Epilepsy	466	544	516	10	2,180	0	2,016	5,722
Tuberculosis (pulmonary)	233	544	516	888	0	1,485	1,344	5,010
Hernia	0	272	258	296	0	495	672	1,993
Other 600s	24,232	15,504	14,706	15,392	36,515	25,740	54,432	186,521
All 600s	37,746	26,656	25,284	24,568	41,085	86,688	294,892	

(a) Assumed is that the percent values for the disability categories are stable in that the same proportions within categories could be obtained for the age group 16-64 as were calculated for all ages in Table 4.34.
(b) See Tables 4.29 and 4.29a.

TABLE A-16—Estimated Total Incidence by Planning Areas, All Ages, 1975 Population Percents as in Table 4.34.

	Planning areas							
Disability category	*Abingdon*	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	16,926	6,084	5,760	15,428	12,180	25,816	22,536	104,730
Hearing impairment	16,492	8,112	7,680	10,469	11,165	17,518	28,796	100,232
Orthopedic impairment	41,230	31,941	30,240	36,917	58,870	61,774	113,932	374,904
Absence or amputation	3,038	1,521	1,440	2,204	2,030	3,688	5,008	18,929
Psychosis & neurosis	5,642	15,210	14,400	4,408	9,135	7,376	17,528	73,699
Other personality disorders	868	6,084	5,760	2,755	2,030	4,610	8,764	30,871
All 500s	6,510	21,294	20,160	7,714	11,165	12,908	30,048	109,799
Cardiac and circulatory	23,436	16,731	15,840	14,877	26,390	24,894	52,584	174,752
Epilepsy(a)	868	1,014	960	0	4,060	0	3,756	—
Tuberculosis (pulmonary) (a)	434	1,014	960	1,653	0	2,766	2,504	—
Hernia(a)	0	507	480	551	0	922	1,252	—
Other 600s	45,136	28,899	27,360	28,652	68,005	47,944	101,412	347,408
All 600s	70,308	49,686	47,040	45,733	98,455	76,526	161,508	549,256

(a) Insufficient data for estimation purposes.

TABLE A-17—Estimated Total Incidence by Planning Areas, Age Eligible (16 to 64 Years)
1975 Population(a),(b)
(Percents as shown in Table 4.34).

Disability category	*Planning areas*							
	Abingdon	*Roanoke*	*Charlottes-ville*	*South Boston*	*Alexandria*	*Richmond*	*Norfolk*	*Total*
Visual impairment	7,828	3,528	3,336	8,960	7,068	14,980	13,068	60,768
Hearing impairment	9,576	4,704	4,448	6,080	6,479	10,165	16,698	58,150
Orthopedic impairment	23,940	18,522	17,514	21,440	34,162	35,845	66,066	217,489
Absence or amputation	1,764	882	834	1,280	1,178	2,140	2,904	10,982
Psychosis and neurosis	3,276	8,820	8,340	2,560	5,301	4,280	10,164	42,741
Other personality disorders	504	3,528	3,336	1,600	1,178	2,675	5,082	17,903
All 500s	3,780	12,348	11,676	4,480	6,479	7,490	17,424	63,677
Cardiac and circulatory	13,608	9,702	9,174	8,640	15,314	14,445	30,492	101,915
Epilepsy	504	588	556	0	2,356	0	2,178	6,182
Tuberculosis (pulmonary)	252	588	556	960	0	1,605	1,452	5,413
Hernia	0	294	276	320	0	535	726	2,151
Other 600s	26,208	16,758	15,846	16,640	39,463	27,820	58,806	201,541
All 600s	40,824	28,812	27,244	26,560	57,133	44,405	93,654	318,632

(a) Assumed is that the percent values for the disability categories are stable in that the same proportions within categories could be obtained for the age group 16-64 as were calculated for all ages in Table 4.41.

(b) See Tables 4.29 and 4.29a.

Section III — A Comparison of Agency Activity During 1967 and 1968 and Incidence Values Derived from the Community Surveys

TABLE 1—Reported DVR Caseload for the Fiscal Year 1967 by Selected Disability Categories

	Status June 30, 1967				
VRA Class of Disabilities	*Closed Not Rehabilitated*	*Closed Rehabilitated*	*Remaining*	*Total Cases*	*% of Total*
Visual Impairments					
blindness, both eyes	34	12	10	56	
blindness, one eye	147	58	284	389	
other	162	32	157	351	
Total	343	102	351	796	3.1
Hearing Impairments					
deafness, unable to talk	25	53	88	166	
deafness, able to talk	52	63	113	228	
other	80	60	148	288	
Total	157	176	349	682	2.7
Orthopedic Deformity (except amputations)					
impairment involving three or more limbs	131	43	228	271	
impairment involving one upper & one lower limb	133	67	167	367	
impairment involving one or both upper limbs	277	180	402	809	
impairment involving one or both lower limbs	628	333	985	1,946	
other	618	338	932	1,888	
Total	1,737	961	2,714	5,412	21.3
Absence or Amputation of Major & Minor Members					
loss of at least one upper and one lower major extremity	5	12	13	30	
loss of both major upper extremities	2	1	4	7	
loss of one or both major lower extremities	89	110	253	452	
loss of one major upper extremity	30	21	58	109	
other	32	17	26	75	
Total	158	161	354	673	2.6
Mental, Psychoneurotic, and Personality Disorders					
psychotic disorders	288	109	517	914	5.9
psychoneurotic disorders	227	77	282	586	
other	530	160	1,166	1,856	7.3
mental retardation	842	433	2,453	3,728	14.7
Total	1,887	779	4,418	7,084	27.8

TABLE 1—Reported DVR Caseload for the Fiscal Year 1967 by Selected Disability Categories (continued)

	Status June 30, 1967				
VRA Class of Disabilities	*Closed Not Rehabilitated*	*Closed Rehabilitated*	*Remaining*	*Total Cases*	*% of Total*
Other Disabling Conditions for Which Etiology is not Known or not Appropriate					
conditions resulting from neoplasms	128	447	278	853	
allergic, endocrine system, metabolic & nutritional diseases	275	178	521	974	
diseases of the blood and blood-forming organs	22	9	47	78	
disorders of the nervous system	220	71	382	673	
cardiac and circulatory conditions	604	367	822	1,793	
respiratory diseases	392	97	343	832	
disorders of digestive system	496	973	1,080	2,549	
conditions of genito-urinary system	250	590	582	1,422	
speech impairment	82	37	215	334	
disabling diseases & conditions	290	223	545	1,060	
Total	2,759	2,994	4,815	10,568	
Year Totals	7,060	5,175	31,206	25,441	

SOURCE: Virginia Department of Vocational Rehabilitation.

TABLE 1a—Commission for the Visually Handicapped's Caseload for Fiscal Year 1967

1. Active caseload(a)	1,123
2. Visually handicapped(b)	247
3. Aid to the Blind(c)	1,137

(a) CVH is composed of several departments, one of which is the vocational rehabilitation branch of the agency. The total reported indicates only those blind persons who meet eligibility and feasibility requirements.

(b) Approximately 22 percent of the total caseload.

(c) There is some overlap between categories 1 and 3.

SOURCE: Virginia Commission for the Visually Handicapped, *Annual Report*, April 30, 1968.

TABLE 2—Reported DVR Caseload for the Fiscal Year 1968 by Selected Disability Categories

VRA Class of Disabilities	*Status June 30, 1968*				
	Closed Not Rehabilitated	*Closed Rehabilitated*	*Remaining*	*Total Cases*	*% of Total*
Visual Impairments					
blindness, both eyes	21	0	14	35	
blindness, one eye	129	52	183	364	
other	229	42	216	487	
Total	379	94	413	886	2.7
Hearing Impairments					
deafness, unable to talk	40	28	114	182	
deafness, able to talk	61	68	136	265	
other	113	95	246	454	
Total	214	191	496	901	2.7
Orthopedic Deformity (except amputations)					
impairment involving three or more limbs	194	62	281	537	
impairment involving one upper & one lower limb	148	48	194	390	
impairment involving one or both upper limbs	283	174	468	925	
impairment involving one or both lower limbs	751	386	1,281	2,418	
other	738	349	945	2,032	
Total	2,114	1,019	3,169	6,302	19.2
Absence or Amputation of Major and Minor Members					
loss of at least one upper and one lower major extremity	4	5	16	25	
loss of both major upper extremities	3	1	3	7	
loss of one or both major lower extremities	94	149	251	494	
loss of one major upper extremity	32	32	61	125	
other	33	13	23	69	
Total	166	200	354	720	2.2
Mental, Psychoneurotic, and Personality Disorders					
psychotic disorders	582	180	906	1,668	7.3
psychoneurotic disorders	239	107	390	736	
other	1,045	395	1,839	3,279	10.0
mental retardation	1,455	639	3,136	5,230	15.9
Total	3,321	1,321	6,271	10,913	36.3

TABLE 2—Reported DVR Caseload for the Fiscal Year 1968 by Selected Disability Categories (continued)

	Status June 30, 1968				
VRA Class of Disabilities	*Closed Not Rehabilitated*	*Closed Rehabilitated*	*Remaining*	*Total Cases*	*% of Total*
Other Disabling Conditions for which Etiology is not Known or not Appropriate					
conditions resulting from neoplasms	167	610	249	1,026	
allergic, endocrine system, metabolic & nutritional diseases	348	168	666	1,182	
diseases of the blood and blood-forming organs	36	14	53	103	
disorders of the nervous system	277	94	466	837	
cardiac and circulatory conditions	733	480	868	2,081	
respiratory diseases	393	110	393	896	
disorders of digestive system	372	1,178	1,686	3,236	
condition of genito-urinary system	317	800	775	1,892	
speech impairment	113	55	242	410	
disabling diseases & conditions	764	118	527	1,409	
Total	3,520	3,627	5,925	13,072	39.8
Year Totals	9,714	6,452	16,628	32,794	

SOURCE: Virginia Department of Vocational Rehabilitation

TABLE 2a—Commission for the Visually Handicapped's Caseload for Fiscal Year 1968

1. Cases served(a)	1,952
2. Visually handicapped(b)	429
3. Aid to the Blind(c)	1,308

(a) CVH is composed of several departments, one of which is the vocational rehabilitation branch of the agency. The total reported indicates only those blind persons who can meet eligibility and feasibility requirements.

(b) Approximately 22 percent of the total caseload.

(c) There is some overlap between categories 1 and 3.

SOURCE: Virginia Commission for the Visually Handicapped.

TABLE 3—Community Survey Data for Five Areas of the State by Selected Disability Categories

	Incidence Data			
VRA Class of Disabilities	*Total Incidence*	*% of Total Incidence*	*% of Elig. Population*	*State Incidence*
Absence or Amputation of Major & Minor Members				
loss of at least one upper and one lower major extremity	1	0.14	0.04	1,080
loss of both major upper extremities	0	0.00	0.00	0
loss of one or both major lower extremities	3	0.41	0.12	3,258
loss of one major upper extremity	0	0.00	0.00	0
other	8	1.10	0.32	8,687
Total	12	1.66	0.48	13,030
Mental, Psychoneurotic, and Personality Disorders				
psychotic disorders	58	8.00	2.33	63,250
psychoneurotic disorders	0	0.00	0.00	0
other	19	2.62	0.76	20,631
mental retardation	7	0.97	0.28	7,601
Total	84	11.59	3.37	91,482
Other Disabling Conditions for which Etiology is not Known or not Appropriate				
conditions resulting from neoplasms	3	0.41	0.12	3,258
allergic, endocrine system, metabolic & nutritional diseases	30	4.14	1.21	32,847
diseases of the blood and blood-forming organs	0	0.00	0.00	0
disorders of the nervous system	11	1.52	0.44	11,944
cardiac and circulatory conditions	90	12.41	3.62	98,268
respiratory diseases	42	5.79	1.69	45,877
disorders of digestive system	89	12.28	3.58	97,182
conditions of genito-urinary system	2	0.28	0.08	2,172
speech impairment	19	2.62	0.76	20,631
disabling diseases and conditions	16	2.21	0.64	17,373
Total	302	41.66	12.13	329,280

TABLE 3—Community Survey Data for Five Areas of the State by Selected Disability Categories (a) (continued)

VRA Class of Disabilities	*Incidence Data*			
	Total Incidence	*% of Total Incidence*	*% of Elig. Population* (b)	*State Incidence* (c) (d)
Visual Impairments				
blindness, both eyes	3	0.41	0.12	3,258
blindness, one eye	6	0.83	0.24	6,515
other	35	4.83	1.41	38,276
Total	44	6.07	1.77	48,048
Orthopedic Deformity (except amputations)				
impairment involving three or more limbs	19	2.62	0.76	20,631
impairment involving one upper & one lower limb	6	0.83	0.24	6,515
impairment involving one or both upper limbs	24	3.31	0.96	26,060
impairment involving one or both lower limbs	36	4.97	1.45	39,362
other	142	19.59	5.71	155,003
Total	227	31.31	9.12	247,571

(a) These incidence findings are based on data collected during the five community surveys. Extent of limitation was not a factor in deriving these data.

(b) Age-eligibility is defined as 16 to 64 years.

(c) An estimated 2,714,590 persons in Virginia during 1968 were eligible for VR services with respect to age-eligibility.

(d) See Table 4.30 for a complete description of the derivation of population and incidence values.

Data and Rationale in Support of Recommendations

The following information provides the rationales for the recommendations which the Governor's Study Commission has made. The evidence is presented in as abbreviated a form as possible. For fuller explanation see the reports and other materials cited throughout in footnotes and (or) parenthetically.

Individual recommendations often relate to several disabilities, programs, or other aspects of the total plan, but each is presented only once. Cross references are provided on pages 33-34 to guide the reader to related recommendations and evidence.

The deisgnations, "action," "immediate," "soon," "interim," and "long range," accompanied by a priority number before each recommendation, denotes the location of that recommendation in the "Summary of Recommendations" in this report. Check that citation for information about proposed ways to implement the recommendation, primary responsibilities for implementation, and funding and manpower requirements.

Sensory Disabilities[1]

Among persons between the ages of sixteen and sixty-four in Virginia, sensory disabilities—visual, hearing, and speech impairments—accounted for approximately 10 percent of total disabilities in 1968. Estimated incidence of sensory disabilities in the State during 1968 was 122, 218 of which 46 percent were hearing impairments, 33 percent were visual impairments, and 20 percent were speech impairments.

A more meaningful estimate relating to sensory disabilities is the number of given sensory disabilities which result in severe work and/or activity limitations, since these are the types of limitations which are most relevant for the population group needing vocational rehabilitation services. In the aggregate, 13,026 sensory disabilities result in these types of major activity limitations. Visual impairments account for 42 percent of the severely limiting sensory disabilities, speech impairments account for 33 percent, and hearing impairments account for 25 percent.

On the average, more than one out of every nine sensory disabilities results in a severe major activity limitation among the "age-eligible" population. (It should be noted that there are no longer minimum or maximum age limits for vocational rehabilitation services. Age eligible as used here refers to the population group for whom services are feasible.) In addition, 15,198 sensory disabilities result in moderate major activity limitations.

There is considerable data relevant to visual, hearing, and speech impairments in the seven planning areas as defined by the State Department of Vocational Rehabilitation. Several estimates of sensory incidence, by both the total number in Virginia and the incidence by planning areas, have been made. See the report, *Estimation and Projection of Disability Incidence and Prevalence in Virginia,* Report #11 in the series, "Vocational Rehabilitation in Virginia," (Charlottesville: Institute of Government, mimeo., July 1968). A complete description of the data is given in that reference.

A sizeable gap exists between the actual number of cases of sensory disabilities and the number served. Also, the gap between area-activity by the agencies and the actual incidence of sensory disabilities varies among the planning areas. Although some visually handicapped persons who in some way receive services from CVH are not listed, there exist obvious differences among the data, which presents incidence findings from the community surveys. Clearly, there are many persons in the Commonwealth with sensory

Estimates of Incidence of Sensory Disabilities Among Persons Sixteen to Sixty-four in Virginia, 1968

	Total Incidence		*Severe*		*Moderate*		*Mild*	
	#	%	#	%	#	%	#	%
Speech	24,968	20	4,342	33	2,171	14	18,455	20
Visual	40,438	33	5,428	42	7,599	50	27,411	29
Hearing	56,722	46	3,256	25	5,428	36	48,038	51
Total	122,128	99%	13,026	100%	15,198	100%	93,904	100%

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[1] **For a detailed analysis of the many interrelated aspects of serving the visually handicapped see the report, *Selected Materials Relating to Sensory Disabilities in Virginia,* Report No. 12 of the series, "Vocational Rehabilitation in Virginia," (Charlottesville: Institute of Government, mimeo., July 1968).**

disabilities who are not being reached by the rehabilitation agencies.

Virginia law requires that a State blindness registry be maintained. Physicians are required to report all cases of blindness but often fail to do so. Medical schools could provide significant assistance by including information about reporting and other vocational rehabilitation programs in their curriculum.

Recommendation (Immediate 18): Seek ways (statutory, administrative, informational) to improve the reporting of legally blind persons to CVH.

Recommendation (Immediate 22): Develop a more efficient referral system for potential clients having hearing disabilities.

Recommendation (Interim 17): Increase CVH appropriations in order that more clients may be rehabilitated.

Recommendation (Interim 21): Encourage local school boards to take advantage of the permissive legislation passed in the 1968 General Assembly which allows localities to develop special education for children (ages 2-20) with hearing impairments (in cooperation with the State Board of Education).

With the exception of the Workshops for the Blind in Richmond and Charlottesville, operated by the Commission for the Visually Handicapped, workshop services to persons with sensory disabilities is virtually non-existent. There are thirteen workshops in the State, of which only two—the Workshops for the Blind noted above—are publicly operated.

During fiscal year 1967, rehabilitation workshops in Virginia reported serving 942 clients. Of this total number 176 (18.7 percent) were placed in competitive employment, and 196 (20.8 percent) were placed in workshop employment. The Workshops for the Blind served 102 clients (10.8 percent of all clients served) of which nineteen were placed, one in competitive employment and eighteen in the workshops. Most workshops, therefore, provide terminal rather than transitional employment for the large majority of their clients. And since annual turnover in existing workshops is only about 200 clients per year, expansion of services to any disability group within the present workshop capability would be extremely difficult.

Eight workshops reported serving visual impairments, eight reported serving hearing impairments, and seven reported serving speech impairments. With the exception of the two Workshops for the Blind, which served 102 visually impaired persons in fiscal year 1967, only four workshops served persons whose primary disability was visual, and three workshops reported serving clients whose primary disability was a hearing or speech impairment. Again excepting the Workshops for the Blind, only fifty-one clients with primary sensory disabilities were served by workshops in fiscal year 1967.

The services provided by workshops are primarily related to the vocational training process. Only one workshop in the State provides speech and hearing services. Further, the major service provided by most workshops is extended employment.

According to rehabilitation counselors, approximately 10.4 percent of persons with speech impairments, 8.3 percent of persons with visual impairments, and 11.4 percent of persons with hearing impairments could use workshop services if those services were available and adequate. While these estimates are related to rehabilitation agency caseload, projecting them to disability incidence figures on a Statewide basis which result in severe activity limitations provides a reasonable basis for estimating minimal workshop needs for persons with sensory disabilities. According to the projected figures, workshop services are needed for 1,226 persons with sensory disabilities. Since all workshops in the State reported serving only 153 persons with primary sensory disabilities in fiscal year 1967, it is apparent that workshop services are not available for most persons having sensory disabilities. Indeed, workshop services have been provided to only about one-eighth of the persons who have sensory disabilities who could use these services.

During the 1967 fiscal year, rehabilitation facilities in the State reported serving 6,312 clients, with the public facilities accounting for 5,546 (or 87.9 percent) of the total. Approximately 60 percent of the clients (3,825) were served by DVR's school, mental, and correctional units. While a majority of the facilities reported serving persons with sensory disabilities, the actual number of persons with visual, speech, or hearing impairments served by rehabilitation facilities was quite small. Of the nineteen facilities for whom figures were available, seven reported serving clients whose primary disability was visual; six reported serving clients whose primary disability was hearing impairments; and four reported serving clients with speech impairment as the primary disability. Moreover, the total number of clients with primary sensory disabilities served by all rehabilitation facilities in fiscal year 1967 was 179. This represented 2.8 percent of all clients served during the period.

Counselor estimates of the need for rehabilitation facility and comprehensive centers vary between disability groups (Table 4.53). The need for comprehensive center services is greatest among persons with speech impairments and the need for rehabilitation facility services is relatively greatest among persons with hearing impairments.

If these estimates are projected to the incidence figures for severely impairing sensory disabilities, total need for rehabilitation facility services is found to exist for 3,648 individuals with sensory disabilities and total need for comprehensive center services is found to exist for 2,242 individuals with sensory disabilities. These figures are not additive, since the services of both types of facilities are to some extent interchangeable. Nevertheless, when these estimated needs are compared to actual service, only about 6 percent of those persons who need facility services are being served.

In 1967, workshop services were provided for 153 persons with primary sensory disabilities. During the same period, rehabilitation facility services were provided for 179 persons with primary sensory disabilities.

Recommendation (Immediate 2): Create and support a school unit at the Virginia School for the Deaf and Blind in Staunton.

Recommendation (Immediate 1): Create and support a school unit at the Virginia State School at Hampton.

Recommendation (Immediate 19): Create a work evaluation unit in the Charlottesville Workshop for the Blind (operated by CVH).

Recommendation (Soon 9): Expand program of work evaluation unit in the Charlottesville Workshop for the Blind.

Recommendation (Soon 14): Expand CVH's two local "Personal Adjustment Training Programs."

Recommendation (Interim 8): Expand VR personnel of CVH.

Recommendation (Interim 16): Provide at least one specialized counselor for the deaf in each of the seven DVR administrative areas.

Recommendation (Interim 15): Expand work evaluation unit in Charlottesville Workshop for the Blind.

Recommendation (Interim 4): Construct and equip a Rehabilitation Adjustment Training Center for the Blind (operated by CVH) by 1972.

Recommendation (Long Range 2): Expand the Rehabilitation Adjustment Training Center for the Blind by 1973.

Recommendation (Long Range 6): Continue work evaluation unit in the Charlottesville Workshop for the Blind and establish a new unit in Richmond in conjunction with the Richmond Workshop for the Blind.

One factor which vitally affects the range and quality of services a workshop offers is the type of work contract it secures. Quite often the major portion of contracted work involves activities which do not permit workers to earn minimum wages. There is, in Virginia, a need to develop market outlets and contracts for workshops. Further, if a guaranteed market were available, workshops would be able to advance to more sophisticated production.

One source of contracts to be considered is State and local governments, as there is an increasing demand by governmental agencies for services. In fact, such action might assist in solving two problems; that of providing jobs for the handicapped, and making technical services available to governmental agencies.

Recommendation (Interim 18): Consider State administrative encouragement, ruling, etc., or legislation to give public business to workshops.

The Vocational Rehabilitation Department of CVH has not established any facilities in cooperation with other institutions such as schools, correctional institutions, and mental hospitals. Some of the services which DVR provides through its special units are, however, also provided by the Vocational Rehabilitation Department of CVH. Since CVH supervises educational services for the blind through its Educational Services Department and welfare assistance to the blind through Aid to the Blind, intra-agency referrals for vocational rehabilitation services are made, when appropriate, to the Vocational Rehabilitation Department of CVH.

Other intra-agency related programs include the Business Enterprises Department, the Home Study Department, the CVH Workshops (located in Charlottesville and Richmond) which provide training and employment for blind adults referred by the Vocational Rehabilitation Department. The Business Enterprises Department operates the vending stand program through which vending stands are established for visually handicapped persons in public and private buildings. Under this program, rehabilitation clients can be trained and established in vending stand operations. The Home Teaching Department provides a number of services, including counseling and instruction, to pre-school children and adults. Where necessary, referrals can be made between the Home Studies Department and the Vocational Rehabilitation Department. In November 1967, a revised agreement was established for two departments setting forth the procedures to be followed by rehabilitation counselors and rehabilitation teachers in implementing a coordinated service program for rehabilitation clients. In addition, the services of the Talking Book Machine and Library Services Department are available for rehabilitation clients.

The intra-agency programs, then, are a function of agency policy. And, as the intra-agency programs which have been described indicate, the Commission for the Visually Handicapped has developed policies and procedures applicable to all departments composing the Commission which are designed to enhance full utilization of total Commission services in serving clients.

Recommendation (Interim 19): Expand the Vocational Rehabilitation part of the home teaching—Rehabilitation Cooperative Program of CVH.

Recommendation (Interim 20): Expand the Business Enterprise Program of CVH.

Recommendation (Long Range 8): Continue the Vocational Rehabilitation part of Home Teaching—Rehabilitation Cooperative Program of CVH.

Recommendation (Long Range 7): Continue the expanded Business Enterprise Program (CVH).

Psychosocial Disabilities

Special Service Programs

There are many public agencies which have responsibility for providing specific services to certain disabled individuals. No one agency, however, has the responsibility for providing services that may be needed by each disabled person in his effort to enter, remain in, or return to employment. Each public agency has legal limitations with respect to whom it can serve and the services which can be provided. Each agency also has financial limitations which may be restrictive.

As has been stated, DVR has the authority and responsibility for providing vocational rehabilitation services to eligible disabled even if they are also the legal responsibility of another agency for other services. Limited vocational rehabilitation programs have been initiated with other public agencies as a result of cooperative agreements. The programs which are presently in existence can be maintained without the appropriation of additional State funds to the Department; however, expansion of these programs will require additional funds. In most instances, the State matching funds can be derived through a cooperative agreement or through the transfer of funds from the other public agencies. In a few instances, Federal funds might be obtained and the program of services greatly expanded through a change in the administration of the existing program.

Recommendation (Action 12): Have the Division of State Planning and Community Affairs study related State agency programs to determine if it would be in the best interest of the State for DVR to administer all rehabilitation functions.

Department of Mental Hygiene and Hospitals

Central State Hospital. Through a cooperative agreement, certain buildings at the Hospital have been assigned to the Department of Vocational Rehabilitation for use in carrying out its program. The former personnel building, with a maximum capacity of 125 persons, is used to house rehabilitation clients who are also patients of the Hospital. A small building is used as a workshop and two small buildings are used in vocational evaluation and training. The Hospital provides, from its regular staff, the nurses and attendants and certain other personnel on a part-time or full-time basis who work full-time with the clients housed in the rehabilitation building. These expenditures of the Hospital are certified as being spent for vocational rehabilitation purposes and the Department of Vocational Rehabilitation earns Federal funds therefrom. The Federal funds are then used to pay the additional cost involved in the program operations at the Hospital. This includes staff in the area of counseling, evaluation, social work, psychology, instructors in training, the workshop, etc.

The existing vocational rehabilitation program can be financed under the arrangement listed above. Consideration should be given, however, to an actual transfer of the funds and personnel involved in the operation of the program to the Department of Vocational Rehabilitation. This would insure that all State expenditures involved would earn Federal funds, whereas under present arrangements some State expenditures cannot be sufficiently identified for certification purposes. Many states have taken this approach in the development of vocational rehabilitation programs in mental hospitals.

It is estimated that approximately 200 clients (patients) will be discharged from the Hospital each year as a result of the rehabilitation program and will need additional services after they leave the institution. If these services outside the institution are to be provided, the Department of Vocational Rehabilitation must have additional State funds to complete the rehabilitation program for each individual.

Western State Hospital. A rehabilitation unit, similar to the one listed above, is operated at Western State Hospital. The building assigned to DVR will house seventy clients and it is estimated that approximately 125 persons each year will be discharged from the Hospital and will require additional rehabilitation services after they leave the institution.

Eastern State Hospital. No formal rehabilitation unit has been established. The Hospital does have an intensive rehabilitation unit with housing facilities for fifty patients. It is felt that this might be the nucleus of a rehabilitation unit. At present, a full-time rehabilitation counselor is assigned to the Hospital and he maintains an average caseload of approximately seventy-five clients. The potential is many times this amount if a rehabilitation unit were established.

Southwestern State Hospital. No formal rehabilitation unit has been established. Under present conditions, it is doubtful that one could be established because of the type of patients and the lack of space and personnel which could be assigned. A rehabilitation counselor is assigned on a part-time basis.

Northern Virginia Hospital. This is a new institution to provide intensive treatment for acute psychiatric disturbances. There are to be 100 in-patient beds for hospitalized patients. It is indicated that the institution is to serve those individuals who have the greatest vocational rehabilitation potential. It could well be that a large number of all the patients served could also fall under the category of vocational rehabilitation clients. Much study and consideration should be given to the possibility of developing a cooperative program. Although there is no valid basis for the estimate, it is estimated that at least fifty of the patients served will be clients of DVR and require additional services after discharge from the institution in order to return to work.

Petersburg Training School for the Retarded. This institution has a rated bed capacity of 360 patients with an average in-patient load of 288 during the fiscal year 1967. Mentally retarded individuals between the ages of eight and eighteen are admitted to the institution and a few individuals with an IQ below fifty are accepted. According to the report of the institution, more than one-half of the individuals are above fourteen years of age and are being provided certain elements of vocational rehabilitation.

No vocational rehabilitation unit is in operation at the institution, although a rehabilitation counselor is asigned on a full-time basis. The rehabilitation counselor generally gets referrals toward the end of the service program provided by the institution. It is believed that a high percentage of the total operating cost of the institution could qualify as matching for Federal Vocational Rehabilitation Funds if a program were developed which met the requirements of that agency. Serious study and consideration should be given to the development of a method through which the rehabilitation services in this institution could be greatly expanded by the use of Federal vocational rehabilitation funds.

Lynchburg Training School and Hospital. It is estimated that between 240 and 275 of the patients in this institution have vocational rehabilitation potential. The institution operates a small program which has some of the elements of vocational rehabilitation but does not go far enough to be of most benefit. No vocational rehabilitation unit has been established within the institution, although a counselor is assigned on a part-time basis. It is believed that a unit could be established under a cooperative agreement whereby expenditures for vocational rehabilitation could be specifically identified. Additional staff would be required in the training area, however, this staff will be required when the new vocational rehabilitation building is completed.

Recommendation (Action 7): Seek State appropriation in order to complete the services required for the disabled individuals discharged from Special Service Programs in mental hospitals, schools for the retarded, institutions for youthful public offenders, and public schools.

Department of Welfare and Institutions

Beaumont School for Boys. The enrollment of the School is made up of youthful public offenders above fifteen years of age. It is felt that practically all of the individuals assigned to the School have vocational rehabilitation potential since they have physical or mental disabilities. The mental disability may be actual mental retardation, functional retardation, or behavioral disorders. It is also believed that most of these individuals are in need of and can benefit from a complete program of vocational rehabilitation which would involve the medical, psychological, social, and vocational services required for their adjustment into a work society on leaving the institution.

The School has operated a relatively small vocational training program with other limited services available in the medical, psychological, and social areas. The stated objective of the School for the future is to provide the total vocational rehabilitation services needed by each individual. Through a cooperative agreement, a Rehabilitation Unit was established at the School. Vocational instructors on the staff of the School are assigned to work full-time with rehabilitation clients. These expenditures are certified as being spent for vocational rehabilitation purposes and earn Federal funds therefrom. The Federal funds are then used to pay the additional costs involved in the program operations at the School. This includes staff in the area of counseling, vocational evaluation, additional instructors in training areas and the cost of training supplies, etc.

The existing program can be maintained without additional State funds, but expansion will require more State money. At the present time, approximately 25 percent of the boys are enrolled in formal vocational training or in remedial academic training relating to a chosen vocation. These services should be expanded so that they will be available to each boy.

The present vocational training building occupies approximately 4,500 square feet. Plans have been approved for the use of Federal vocational rehabilitation money to double the size of the building and purchase the additional equipment needed, with the School providing the 25 percent State matching funds. The expansion of the building will result in the addition of vocational training areas and will require additional vocational instructors. These positions are included in the budget request for the School for the 1968-70 biennium. The School has also requested capital outlay funds during the biennium to again increase the size of the vocational training building so that all students who have vocational potential may receive training.

The Department of Vocational Rehabilitation is in the process of establishing a formal training course in food preparation and food service. In cooperation with the Virginia Restaurant Association, plans have been made for remodeling the existing food service area with the equipment to be purchased by DVR.

It is estimated that between 200 and 250 boys will be discharged from the institution each year who will need additional vocational rehabilitation services after leaving the institution. These services would involve the continuation of training, maintenance while in training, placement and supervision on the job, and the staff required to work with them. State funds should be made available to the Department of Vocational Rehabilitation for the services required after they leave the institution.

Bon Air School for Girls. A rehabilitation program similar to the one described above is operated at the Bon Air School for Girls. The vocational training building at the School is not adequate to meet the demands of the 160 enrollment of the School. Capital outlay funds should be appropriated to match Federal vocational rehabilitation funds in the expansion and remodeling of the vocational training building, and to purchase the additional equipment needed and provide the additional instructional staff. It is estimated that some 150 to 175 girls will be discharged from the institution who will need and who can benefit from vocational rehabilitation services while they are in the institution. They will also require additional services after leaving the institution.

Natural Bridge Forestry Camp. A rehabilitation program similar to that operated at the Beaumont School for Boys has been established at the Natural Bridge Forestry Camp. The Department of Vocational Rehabilitation has purchased equipment needed in the training areas and is providing several staff members. It is felt that all of the boys in the 90 to 100 enrollment at the School are excellent prospects for vocational rehabilitation. The program at the School should be expanded so that the vocational training and other services will be available to all of the boys.

Diagnostic and Evaluation Center. This is a new facility being constructed on State property at the Bon Air School for Girls. All juvenile offenders are to be sent to this 120 bed facility for a period of five to six weeks for diagnosis and evaluation. Determination will be made as to whether the individual is assigned to one of the training schools or whether some other action will be taken. The basic services are to be medical, psychiatric, psychological, and social evaluation. Vocational evaluation should be an essential element in the diagnosis and the Department of Vocational Rehabilitation should be provided with funds to employ the rehabilitation staff required to participate in the total evaluative process. Most of the diagnostic work could thereby be done and a vocational rehabilitation program planned for those individuals above fifteen years of age regardless of whether they were sent to a school, placed in a foster home, or otherwise placed.

Supervised Boarding Homes. It is understood that funds have been requested to establish supervised boarding homes for individuals discharged from the youthful offender institutions so that follow-up services, including placement on jobs, could be done. This service can be provided by the Department of Vocational Rehabilitation for all individuals above sixteen years of age who meet the eligibility requirements. It is felt that most individuals in the schools mentioned above would be DVR clients if the program were expanded within the institutions. Serious consideration should be given to the close cooperation between the two departments in this phase of service.

Penal Institutions. No formal vocational rehabilitation program has been established in the penal institutions although a few referrals are received. Many states have developed rather extensive programs through cooperative agreements. The potential for vocational rehabilitation is very good and much study and consideration should be given to the close cooperation between the two departments.

Recommendation (Soon 3): DVR should consider the feasibility of creating special service units in the State's Penal Institutions.

Cooperative Programs With Local Public Schools

DVR has formal cooperative agreements with the following local public school systems: Albemarle County, Alexandria City, Chesapeake City, Fairfax County, Harrisonburg-Rockingham County, Richmond City, and Roanoke County.

Through the cooperative agreements, a work-study program is developed involving individuals at the secondary level who are physically handicapped, mentally retarded, functionally retarded, or emotionally disturbed. The schools assign certain special education teachers, vocational instructors, psychologists, or other personnel to work either on a part-time or full-time basis with those individuals who are accepted as clients. The academic instruction received is related to the vocational objective selected for the individual. The Department of Vocational Rehabilitation certifies the funds spent by the local school systems for these vocational rehabilitation purposes and Federal funds are earned therefrom. The Federal funds are then used to pay the additional costs involved in the program, including the services needed by the individuals which must be purchased from sources outside the school systems.

This same type of cooperative working relationship is possible with each local public school system which has a special education program at the secondary level. Much study and consideration should be given to expanding activities in this area.

It is estimated that approximately 525 to 700 individuals from the school systems with cooperative programs will need additional services after they have completed the school program in order to be satisfactorily trained and placed in employment. This number, of course, will increase each succeeding year as the programs reach full potential.

Recommendation (Soon 10): Continue efforts to initiate and expand DVR's special service units in cooperation with other agencies of State and local government.

Recommendation (Soon 5): Encourage cooperation between local school boards and the State Department of Education to develop special prevocational training for children with disabilities.

Programs: The Ageing

Various data document the paucity of rehabilitation resources used for aged Virginians. Workshops and rehabilitation facilities are virtually non-existent for the aged. Although eligibility requirements prevent vocational rehabilitation agencies from accepting responsibility for services to the aged, vocational rehabilitation can cooperate in planning for the aged.

Recommendation (Soon 6): Coordinate efforts to consider developing rehabilitation facilities for the aged with the Governor's Commission on Mental and Geriatric Patients created by the 1968 General Assembly.

Programs: Workshops and Facilities[1]

For the purposes of reporting the information and of determining needs on a geographical basis, the State of Virginia has been divided into ***seven planning areas*** which correspond to these administrative areas. The use of this type of division will not only facilitate initial planning and promote the provision of services and facilities for major population areas but will also provide useful correspondence between workshop and facilities planning and DVR statistical information relating to client caseload and disability incidence and prevalence within the major planning areas.

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[1] **Detailed treatment of this topic is reported by Dr. Dennis S. Ippolito in Report No. 1 (*Rehabilitation Workshops, Facilities, and Resources in Virginia*) and Report No. 13 (*Estimated Needs for Workshops, Rehabilitation Centers, and Comprehensive Center Services in Virginia*) in the series, "Vocational Rehabilitation in Virginia." (Charlottesville: Institute of Government, 1968, mimeo.)**

Planning Area I. Abingdon Area: includes the counties of Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe, and the cities of Bristol, Galax, Norton.

Planning Area II. Roanoke Area: includes the counties of Alleghany, Botetourt, Craig, Floyd, Franklin, Giles, Henry, Montgomery, Patrick, Pulaski, Roanoke, and the cities of Clifton Forge, Covington, Martinsvlle, Radford, and Roanoke.

Planning Area III. Charlottesville Area: includes the counties of Albemarle, Augusta, Bath, Clarke, Fauquier, Fluvanna, Frederick, Greene, Highland, Loudoun, Louisa, Page, Rappahannock, Rockingham, Shenandoah, Warren, and cities of Charlottesville, Harrisonburg, Staunton, Waynesboro, and Winchester.

Planning Area IV. South Boston Area: includes the counties of Amelia, Amherst, Appomattox, Bedford, Buckingham, Campbell, Charlotte, Cumberland, Halifax, Lunenburg, Mecklenburg, Nelson, Nottoway, Pittsylvania, Powhatan, Prince Edward, Rockbridge, and the cities of Buena Vista, Danville, Lynchburg, Lexington, and South Boston.

Planning Area V. Alexandria Area: includes the counties of Arlington, Culpeper, Fairfax, Madison, Orange, Prince William, Spotsylvania, Stafford, and the cities of Alexandria, Fairfax, Falls Church, and Fredericksburg.

Planning Area VI. Richmond Area: includes the counties of Brunswick, Caroline, Charles City, Chesterfield, Dinwiddie, Essex, Gloucester, Goochland, Greensville, Hanover, Henrico, King and Queen, King George, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Prince George, Richmond, Surry, Sussex, Westmoreland, and the cities of Colonial Heights, Hopewell, Petersburg, and Richmond.

Planning Area VII. Norfolk Area: includes the counties of Accomack, Isle of Wight, James City, Nansemond, Northampton, Southampton, York, and the cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Portsmouth, Suffolk, Virginia Beach, and Williamsburg.

Table 4.43 provides information about the planning areas which have been established. As indicated, the population of given planning areas varies widely; Planning Area I (Abingdon) contained slightly less than 400,000 persons in 1967, while the largest concentration of population (over 1.1 million) was found in Planning Area VII (Norfolk). It is important to recognize, however, that the number of clients who have been rehabilitated or who are being considered for services by the Department of Vocational Rehabilitation are not directly related to the

Table 4.43—Population and Selected Client Characteristics of DVR Planning Areas in Virginia, 1967

	Population(a)	*Rehabilitated clients*(b)	*Active Cases*(c)	*Ratio of rehabilitated clients to population*
I. Abingdon	387,340	708	1,112	1:547
II. Roanoke	452,091	485	489	1:932
III. Charlottesville	428,772	733	852	1:585
IV. South Boston	491,164	609	632	1:807
V. Alexandria	904,588	795	909	1:1138
VI. Richmond	822,086	875	1,711	1:939
VII. Norfolk	1,116,050	970	1,218	1:1151
	4,602,091	5,175	6,923	1:889

(a) Estimates based on "A Report from the Bureau of Population and Economic Research: Estimates of the Population of Virginia Counties and Cities, July 1, 1967," (Graduate School of Business Administration, University of Virginia: Charlottesville, Virginia, October, 1967.)

(b) (c) Virginia Department of Vocational Rehabilitation, Annual Report. July 1, 1966-June 30, 1967 (Richmond, Virginia: December, 1967), pp. 10-11.

population of a given area. For example, Planning Area I, despite its small population, had the third highest active caseload, the fifth highest number of rehabilitated persons, and the highest ratio of rehabilitated clients to population of all planning areas, according to the Department of Vocational Rehabilitation fiscal year 1967 report.

Research

During a six-month period (October 1967—March 1968), an extensive inventory and analysis was conducted to evaluate certain characteristics of the existing facilities and workshops in the State. Among the factors considered were services, programs, personnel, equipment, size, clientele, financing, and referral systems. Using a questionnaire constructed for this purpose, personal interviews were conducted at each rehabilitation facility and workshop in the State during the period from September through December 1967.

While a list of existing workshops and rehabilitation facilities was rather easily established through consultation with DVR and CVH personnel, particularly the Workshops and Facilities Section of the Department of Vocational Rehabilitation, it was substantially more difficult to inventory additional resources and to obtain information from them. Working from a list of known additional resources provided by the Workshops and Facilities Section of DVR and augmenting this list through information provided by agency personnel (counselors and supervisors in DVR and CVH) and by rehabilitation facilities and workshops personnel, a questionnaire was mailed to more than 200 possible rehabilitation resources. Initial and follow-up mailings elicited a return of 106 questionnaires. Analysis, where possible, of those places which did not respond indicated that many were not actually involved in the rehabilitation process. Nevertheless, the response rate does present problems in data bias, and information on given items within those questionnaires returned was, in many cases, quite limited. It should be recognized, therefore, that the information presented in this report is somewhat limited but does represent a component of rehabilitation resources which might be quite important.

An Overview of Rehabilitation Resources. As shown in Table 4.44, Virginia had thirteen workshops, twenty-two rehabilitation facilities, and at least 106 additional resources when the mail and personal interviews were conducted in early 1968. Table 4.45 shows the distribution of private and public rehabilitation resources in each of the planning areas of the State. The distribution is, of course, widely uneven when given planning areas are considered.

TABLE 4.44—Rehabilitation Resources in Virginia: An Overview

Type of resource	*Number*
Workshop(a)	13
Rehabilitation facility(b)	22
Additional rehabilitation resources(c)	106
	141

(a) Includes workshops and work activity centers.

(b) Includes rehabilitation facilities, public school occupational training centers, and the comprehensive rehabilitation center.

(c) Includes public and/or private organizations which either are or might be sources of assistance in working with vocational rehabilitation clients.

TABLE 4.45—Distribution of Private and Public Rehabilitation Resources by Planning Area in Virginia

	Workshops		*Rehabilitation facilities*		*Additional resources*		
	Public	*Private*	*Public*	*Private*	*Public*	*Private*	*Total*
I. Abingdon	0	0	0	0	3	0	3
II. Roanoke	0	3	0	0	5	9	17
III. Charlottesville	1	1	5	0	10	12	29
IV. South Boston	0	1	1	0	4	4	10
V. Alexandria	0	1	4	3	4	5	17
VI. Richmond	1	2	6	0	14	11	34
VII. Norfolk	0	3	1	2	12	13	31
	2	11	17	5	52	54	141

Utilization of Workshops and Facilities

Utilization of workshops and rehabilitation facilities in Virginia by the Department of Vocational Rehabilitation and the Commission for the Visually Handicapped indicates rather striking differences. In fiscal year 1966, both DVR and CVH purchased case services primarily at rehabilitation facilities and adjustment centers rather than at workshops. In the case of DVR, services at rehabilitation facilities and adjustment centers were purchased for 714 clients at an average cost of $1,136 per client. This was the highest per client average within Region III and was more than twice the per client average of all general agencies in the United States. In the case of CVH, the average per client expenditure at rehabilitation facilities and adjustment centers was slightly above the national average of all agencies for the blind. Use of workshops by both agencies, however, was minimal. Thus, for example, DVR purchased services at workshops for only sixty clients at an average cost of $211. The number of clients for whom services were purchased was rather low in relation to the other areas of Region III and the per client average expenditure was below the national average. The use of workshops by CVH was equally limited, and the per client average expenditure was less than one-fifth the national average for agencies for the blind. (This does not include the Workshops for the Blind, operated by CVH and located in Charlottesville and Richmond. These are part of the overall agency operation, so that case services are not purchased by the agency in these workshops. This same qualification also applies to the fiscal year 1967 data.)

In 1967, the amount of case services purchased from workshops and rehabilitation facilities and adjustment centers by DVR increased. The amounts spent by CVH, however, decreased. The average per client expenditure by DVR in rehabilitation facilities and adjustment centers remained high in relation both to the other areas of Region III and to the national averages. Conversely, the numbers of clients for whom services were purchased at workshops remained relatively low compared to the other areas in Region III, and the per client average expenditure in workshops was substantially less than the national average.

The utilization patterns of the Department of Vocational Rehabilitation are particularly useful in providing a perspective for viewing the workshops and rehabilitation facilities in the State. It is clear, for example, that use of workshops by DVR is minimal while the use of rehabilitation facilities is substantial both in relation to other states in Region III and to national averages.

Rehabilitation Workshops

Type, Location, Sponsorship. Of the thirteen rehabilitation workshops in Virginia, eleven are privately owned and operated. Table 4.46 shows the distribution of workshops by planning area, and also indicates the type of sponsor-interest in property for the public and private workshops. The Commission for the Visually Handicapped operates the two public workshops in the State; these are the Workshops for the Blind located in Planning Areas III (Charlottesville) and VI (Richmond). The Department of Vocational Rehabilitation does not operate any workshops. DVR policy thus far has been to support existing private workshops rather than to establish and operate its own workshops.

While the number of workshops located in given planning areas of the State does show some correspondence with population, the location of workshops corresponds little, if at all, to the active and closed rehabilitated caseloads reported by the Department of Vocational Rehabilitation in each of the planning areas. Planning Area I (Abingdon) has the smallest population of any planning area, but it accounts for the third largest active caseload and the highest ratio of rehabilitated clients to population when compared to other planning areas. There are no workshops in Planning Area I; Planning Area II (Roanoke), on the other hand, has a comparably small population, the lowest active caseload and a relatively low rehabilitant-client ratio, but it has three workshops. While there may be a number of factors accounting for this extreme disparity, this strongly suggests that little planning on a Statewide basis has taken place with respect to the establishment of workshops in various areas of the State. Initiative with respect to the planning and establishment of workshops appears to have come largely from the local community.

Client Caseload and Information. During the 1967 fiscal year, workshops in Virginia reported serving 942 clients. Of this total, 176 (18.7 percent) were placed in competitive employment, and 196 new clients (20.8 percent of the total served) were placed in workshop employment. The two public workshops (CVH operated Workshops for the Blind in Planning Areas III and VI) served 102 clients (10.8 percent of all clients served by workshops) on which nineteen were placed—one in competitive employment and eighteen in the workshops. The client placement figures clearly indicate that most workshops provide terminal employment for the large majority of their clients. The annual turnover in workshops (new clients placed in workshops and other clients placed in competitive employment) approximates only 20 percent. Thus, a substantial increase in use of the workshops by a rehabilitation agency would not be possible under existing circumstances, because annual turnover approximates only 200 clients.

Caseload figures obtained from the workshops also indicate that 119 clients are awaiting services. The largest waiting list was reported in Planning Area VII (53 awaiting services, or 44.5 percent of the total) which also has the largest daily caseload. While the workshops reported a caseload capacity which, if fully utilized, could accommodate a substantial portion of those presently awaiting services, it should be noted that few workshops maintain accurate waiting lists. Moreover, the referral system used in many workshops was such that only a portion of those who need workshop services are recognized in terms of

TABLE 4.46—Sponsorship of Rehabilitation Workshops in Virginia

		Sponsor interest in property		
	Type	*Own*	*Rent or lease*	*Rent free*
Planning Area I—Abingdon				
Public	0			
Private	0			
Planning Area II—Roanoke				
Public	0			
Private	3			
Roanoke Valley Training Center		X		
Roanoke Goodwill Industries		X		
E. L. Burgandine Sheltered Workshop			X	
Planning Area III—Charlottesville				
Public	1			
Workshop for the Blind		X		
Private	1			
Linville-Edom Sheltered Workshop				X
Planning Area IV—South Boston				
Public	0			
Private	1			
Lynchburg Sheltered Workshop				X
Planning Area V—Alexandria				
Public	0			
Private	1			
Northern Virginia Sheltered Occupational Center		X		
Planning Area VI—Richmond				
Public	1			
Workshop for the Blind		X		
Private	2			
Southside Sheltered Workshop		X		
Richmond Goodwill Industries		X		
Planning Area VII—Norfolk				
Public	0			
Private	3			
Tri-County Rehabilitation Workshop			X	
Norfolk Goodwill, Inc.		X		
Tidewater Vocational Center			X	
Total				
Public	2	2	0	0
Private	11	6	3	2

TABLE 4.47—Rehabilitation Workshops and Selected Planning Area Characteristics

	No. of workshops	*Population*(a)	*Active cases*(b)	*Ratio of rehabilitated clients to population*
Planning Area I (Abingdon)	0	387,340	1,112	1:547
Planning Area II (Roanoke)	3	452,091	489	1:932
Planning Area III (Charlottesville)	2(c)	428,722	852	1:585
Planning Area IV (South Boston)	1	491,164	632	1:807
Planning Area V (Alexandria)	1	904,588	909	1:1138
Planning Area VI (Richmond)	3(c)	822,086	1,711	1:939
Planning Area VII (Norfolk)	3	1,116,050	1,218	1:1151

(a) Estimates based on "A Report from the Bureau of Population and Economic Research: Estimates of the Population of Virginia Counties and Cities, July 1, 1967," *op. cit.*

(b) Virginia Department of Vocational Rehabilitation, Annual Report, *op. cit.*, pp. 10-11.

(c) Includes CVH Workshops for the Blind in these two areas which serve clients from the entire State, but the active caseloads and rehabilitant-population ratios do not include CVH caseload figures.

waiting lists. Therefore, the figures reported by the workshops in terms of the number of persons awaiting services cannot be taken as reliable estimates of the numbers of persons actually needing workshop services.

As Table 4.50 indicates, the age groups served by workshops show that relatively few of them serve clients in the "over 55" age category. The majority of workshops reported serving no clients in this age group, and the largest distribution for this age bracket in any given workshop was 15 percent. In three of the planning areas in which there are workshops, persons over 55 years of age were not served.

The indication that most workshops in the State provide primarily terminal employment is reinforced by the figures the workshops report relating to client outcomes at discharge. Table 4.48 indicates that relatively few clients were placed into competitive employment. Table 4.51 shows that relatively few clients were discharged for further training, unfeasible goals, or homebound employment. In several workshops, a substantial number of clients (as high as 90 percent in one workshop) were placed in extended employment within the workshop. Thus, most clients who entered the existing workshops eventually were placed in terminal employment situations.

Disability Groups Served and Types of Services Provided. The only disability group which all workshops reported serving was mental retardation. While a large number of workshops reported serving other major disability groups—such as physical disabilities and emotional disorders—service to these groups was primarily in terms of secondary disabilities.

When the primary disability group served by workshops is examined, it is clear that mental retardation accounts for the greatest portion of the workshop caseloads. Eight workshops reported that mental retardation accounted for at least 10 percent of the primary disability caseload; for seven of these workshops, mental retardation represented 90 percent or more of the primary disability caseload. Since the two Workshops for the Blind (CVH operated workshops in Charlottesville and Richmond) serve only visual impairments as the primary disability, it is evident that other major disability groups are not being served by workshops. Only one workshop reported serving amputees as 10 percent or more of the primary disability caseload, and only two reported comparable service to clients with orthopedic impairments. This is particularly striking in view of the types of disabilities of clients rehabilitated by the Department of Vocational Rehabilitation. Nearly 30 percent of DVR's rehabilitated clients during fiscal year 1967 were in the orthopedic deformity or impairment, amputee, and cardiac and circulatory categories.

TABLE 4.48—Service and Placement of Client by Rehabilitation Workshops in Virginia

	Number of workshops	Clients served	Clients placed in: Competitive employment	Workshops	Total
Planning Area I—Abingdon					
Public	0	0	0	0	0
Private	0	0	0	0	0
Planning Area II—Roanoke					
Public	0	0	0	0	0
Private	3	230	76	84	160
Planning Area III—Charlottesville					
Public	1	65	0	15	15
Private	1	8	0	0	0
Planning Area IV—South Boston					
Public	0	0	0	0	0
Private	1	45	10	14	24
Planning Area V—Alexandria					
Public	0	0	0	0	0
Private	1	55	1	20	21
Planning Area VI—Richmond					
Public	1	37	0	3	3
Private	2	170	24	12	36
Planning Area VII—Norfolk					
Public	0	0	0	0	0
Private	3	332	65	48	113
Totals	13	942	176	196	372
Public	2	102	1	18	19
Private	11	840	175	178	353

From the data reported by the workshops, it appears that only three workshops in the State could possibly be classified as multi-disability workshops, and even within these workshops, mental retardation is the most significant primary disability. Thus, service to clients with other disabilities such as speech, visual, and hearing impairments; amputations or other orthopedic impairments; cardiac diseases; epilepsy; tuberculosis; alcoholism and mental and personality disorders other than mental retardation, has been very restricted.

Extended employment is the major service provided by the greatest number of workshops. This is as expected, since placement and turnover within the workshops is limited. Numerous other services related to the vocational process are also reported by a substantial number of workshops. A majority of workshops reported that they provided such services as prevocational and vocational training; vocational evaluation; vocational and rehabilitation counseling; personal adjustment training; including mobility; job conditioning; job placement; and transitional employment. It should be noted, however, that the provision of services reported here depends upon the interpretation and reporting by individual workshops and does not necessarily indicate that the services for all workshops or for any given workshop are quantitatively or qualitatively satisfactory.

Interagency Information: *Referral system.* Workshops in Virginia reported receiving 466 referrals in fiscal year 1967 from a variety of sources. The most important referral source was the Department of Vocational Rehabilitation which accounted for 244 (52.3 percent of the total) referrals to all workshops. Admission to the two Workshops for the Blind is predicated upon referrals from vocational rehabilitation counselors of the Commission for the Visually Handicapped.

More important, however, is the fact that only 410 persons were referred to workshops by all public and private agencies which might be considered to be related to the rehabilitation process. The number of DVR referrals to workshops, while relatively high,

Table 4.49—Caseload Figures for Workshops in Virginia

	Number of workshops	*Average daily caseload*	*Daily caseload capacity*	*Number awaiting services*
Planning Area I—Abingdon				
Public	0	0	0	0
Private	0	0	0	0
Planning Area II—Roanoke				
Public	0	0	0	0
Private	3	142	165	34
Planning Area III—Charlottesville				
Public	1	65	70	0
Private	1	8	8	0
Planning Area IV—South Boston				
Public	0	0	0	0
Private	1	25	30	17
Planning Area V—Alexandria				
Public	0	0	0	0
Private	1	56	60	0
Planning Area VI—Richmond				
Public	1	30	37	0
Private	2	113	151	15
Planning Area VII—Norfolk				
Public	0	0	0	0
Private	3	305	380	53
Totals	13	744	901	119

represented only about 1 percent of the agency's total caseload during the 1967 fiscal year. Clearly, both public and private agency use of workshops is rather limited.

The number of referrals made by the workshops exceeded the number of referrals which they received. Workshops reported making 482 referrals in fiscal year 1967. A majority of these referrals were to DVR (258). No referrals were reported to such agencies as welfare departments, health departments, hospitals, or to the Job Corps and Manpower Development Training programs. What emerges, then, is the lack of even an informed network of referrals between the workshops and many of the public and private agencies and programs which might be utilized in the rehabilitation process.

This view is reinforced by the finding that less than one-half of the workshops reported that they referred cases which they could not treat to other agencies for either total or auxiliary services. Only six workshops reported making such referrals, and these types of referrals were restricted to given types of disabilities.

Contact between the workshops and related rehabilitation agencies was also limited. Eight workshops reported having frequent contact with DVR, but none reported frequent contact with public schools, health departments, hospitals, Social Security Agency, and military agencies. Further, contact between workshops and such agencies as Virginia Employment Commission, welfare departments, and even other workshops was severely limited.

From the information reported by the workshops, it is clear that their use by rehabilitation agencies (or by agencies which are involved peripherally in the rehabilitation process) is limited and that contact between workshops and such agencies is not widespread. Even for the Department of Vocational Rehabilitation, which is the largest referral source and referral recipient and which is reported as having most frequent contact with workshops in comparison to other agencies, the use of them is extremely low.

Internal Operations: *Counseling programs.* The type of counseling program reported by workshops varied widely. Only four workshops reported having internal counseling programs—that is, counselors working within the workshop—and four others reported using counselors in the Department of Vocational Rehabilitation. Other outside counseling programs were reported by two other workshops, while the remaining workshops reported having no counseling program.

TABLE 4.50—Age Groups Served by Workshops in Virginia

	Number of workshops	Percentage of age groups served(b)		
		Less than 21	21-55	Over 55
		%	%	%
Planning Area I—Abingdon				
Public	0	0	0	0
Private	0	0	0	0
Planning Area II—Roanoke				
Public	0	0	0	0
Private(a)	3	25–80	20–75	0
Planning Area III—Charlottesville				
Public	1	18	70	12
Private	1	25	75	0
Planning Area IV—South Boston				
Public	0	0	0	0
Private	1	70	30	0
Planning Area V—Alexandria				
Public	0	0	0	0
Private	1	75	25	0
Planning Area VI—Richmond				
Public	1	18	70	12
Private	2	7–10	83–90	0–10
Planning Area VII—Norfolk				
Public	0	0	0	0
Private	3	10–50	50–88	2–15

(a) Figures for two of workshops, other is not applicable

(b) Range (lowest and highest) shown for two or more workshops

Vocational evaluation facilities within the State are unable to meet client needs. All of the workshops and rehabilitation facilities reported that they provided this service. However, it is recognized that in nearly every case this service is lacking in the necessary scope and depth. Only one workshop has a vocational evaluation unit as such. Rehabilitation facilities fare somewhat better in this respect but here again they do not meet the need.

A comprehensive vocational evaluation unit is operating at Woodrow Wilson Rehabilitation Center. Its services are in great demand and are scheduled ahead for months. Another problem is the distance and transportation difficulties involved for many vocational rehabilitation clients who need these evaluation services.

Recommendation (Interim 10): Encourage and assist Workshops and Rehabilitation Facilities to set up Vocational Evaluation Units.

Staff. As Table 4.52 indicates, most of the workshops reported relatively few, full-time professional staff members. Seven of the thirteen workshops reported having two or fewer full-time professional personnel. The staff-client ratios are somewhat misleading when comparing all workshops, but they are useful in comparisons between workshops serving similar numbers of clients. In workshops serving fewer than 50 clients, the professional staff-client ratio ranges from 1:7.5 to 1:22.5. The two workshops in the 50-100 client range show a marked disparity, with staff-client ratios ranging from 1:6.5 to 1:26.5. Among the larger workshops (those serving 100 or more clients), the ratios are fairly consistent, ranging from 1:16 to 1:22. It is evident that more than one-half of the existing workshops have professional staffs which are so small as to impose restrictions on the types of services and quality of services which they can provide. Economies of scale and specialization are applicable to workshops in general, but they are irrelevant for many of the workshops in Virginia.

At the present time there are no training courses available for workshop personnel either on the supervisory or the sub-professional level. This is one of the many factors which has hindered the progress of workshops within the State, and will become an even more critical one as the number and size of

TABLE 4.51—Client Outcomes at Discharge

	*Percentage of clients discharged**				
	Unfeasible goals	*Home-makers*	*Homebound employment*	*Extended workshops*	*Further training*
	%	%	%	%	%
Planning Area I—Abingdon					
Public (0)	0	0	0	0	0
Private (0)	0	0	0	0	0
Planning Area II—Roanoke					
Public (0)	0	0	0	0	0
Private (3)	0–2	0	0–1	0–15	0
Planning Area III—Charlottesville					
Public (1)	0	0	0	0	0
Private (1)	0	0	0	0	0
Planning Area IV—South Boston					
Public (0)	0	0	0	0	0
Private (1)	0	0	0	0	25
Planning Area V—Alexandria					
Public (0)	0	0	0	0	0
Private (1)	0	10	0	80	10
Planning Area VI—Richmond					
Public (1)	0	0	0	0	0
Private (2)	4–10	0–2	0–8	17–90	0–4
Planning Area VII—Norfolk					
Public (0)	0	0	0	0	0
Private (3)	0–1	0	0	0–30	0–20

* Where there are more than two workshops of the same type in a given planning area, the percentages shown represent the range from the lowest percentage reported and the highest percentage reported.

workshops increase. Additionally, training courses will be greater in demand when workshops move more closely toward meeting the standards as set up by the National Policy and Performance Council.

Recommendation (Immediate 26): Explore the possibility of establishing training courses on a supervisory level for workshop personnel in community colleges or at Virginia Commonwealth University.

Recommendation (Interim 25): Develop a training program for sub-professional employees in private and public workshops and rehabilitation facilities.

Recommendation (Soon 17): DVR should provide all Workshops with specific guidelines on the Wage and Hour Laws relating to Workshop employment.

Size and condition of physical plant. The small staff in many of the workshops is complemented by a relatively small physical plant. In only five cases did workshops report a production area of 10,000 square feet or more, and six workshops reported production areas of 5,000 square feet or less. Less than 150,000 square feet of production and instructional area is available in all of the existing workshops.

Given the nature of the existing physical plant in many workshops, it is not suprising that eleven of the workshops reported deficiencies in physical plant. Moreover, the reported deficiencies affect workshops in each of the planning areas in which workshops are located. As Table 4.54 indicates, there are a number of different physical plant problems, but inadequate work space—which relates to the production areas shown in Table 4.53—is the most pressing concern.

While all but two workshops reported physical plant deficiencies, only four indicated that current improvement projects for their physical plants were underway. In three of these same workshops, long-range improvement programs were also reported.

Equipment deficiencies. According to the workshops, equipment deficiencies were not as widespread as more general physical plant deficiencies. Nevertheless, five workshops indicated that they had equipment problems, primarily in terms of

Table 4.52—Staff in Virginia Workshops

	Number of professional staff		*Number of other staff*		*Number of clients served*	*Ratio of full-time professional staff to clients served*	*Number of volunteers*
	Full-time	*Part-time*	*Full-time*	*Part-time*			
Roanoke Valley Training Center	2	0	0	0	38	1:19	1
Roanoke Goodwill Industries	11	1	3	0	174	1:16	1
E. L. Burgandine Sheltered Workshop	1	0	0	0	18	1:18	0
Workshop for the Blind (Charlottesville)	10	0	7	0	65	1:6.5	0
Linville-Edom Sheltered Workshop	1	0	0	0	8	1:8	0
Lynchburg Sheltered Workshop	2	0	0	0	45	1:22.5	(a)
Northern Virginia Sheltered Occupational Center	2	0	1	0	55	1:27.5	2
Workshop for the Blind (Richmond)	5	0	4	0	37	1:7.5	0
Southside Sheltered Workshop	2	1	0	0	27	1:13.5	0
Richmond Goodwill Industries	7	0	2	0	143	1:20	0
Tri-County Rehab. Workshop	2	0	0	0	17	1:8.5	0
Norfolk Goodwill Industries	8	0	2	0	175	1:22	0
Tidewater Vocational Center	8	0	2	0	140	1:17.5	0

(a) Social worker and psychologist available from Lynchburg Training School.

Table 4.53—Size of Physical Plant of Virginia's Workshops

	*Production**	*Client capacity*	*Instructional**	*Client capacity*	*Administrative**	*Other*
Roanoke Valley Training Center	1,976	27	0	0	504	1,440
Roanoke Goodwill Industries	9,000	167	2,000	60	1,000	14,000
E. L. Burgandine Sheltered Workshop	1,000	18	0	0	200	5,000
Workshop for the Blind (Charlottesville)	40,000	70	0	0	0	0
Linville-Edom Sheltered Workshop	500	8	0	0	0	2,000
Lynchburg Sheltered Workshop	5,000	50	0	0	0	0
Northern Virginia Sheltered Occupational Center	6,000	60	0	0	400	0
Workshop for the Blind (Richmond)	12,000	37	0	0	0	0
Southside Sheltered Workshop (Petersburg)	1,100	16	0	0	0	0
Richmond Goodwill Industries	37,000	135	0	0	0	0
Tri-County Rehabilitation Workshop	400	5	0	0	0	250
Norfolk Goodwill Industries	10,000	175	0	0	2,600	20,000
Tidewater Vocational Center	10,900	125	0	0	1,000	**

* Production space—square feet
** 800 acres—gardening; capacity 20.

Table 4.54—Physical Plant Deficiencies in Virginia's Workshops

	Number of workshops	*Workshops reporting physical plant deficiencies**
Planning Area I—Abingdon		
Public	0	
Private	0	
Planning Area II—Roanoke		
Public	0	
Private	3	
Roanoke Valley Training Center		X
Roanoke Goodwill Industries		
E. L. Burgandine Sheltered Workshop		X
Planning Area III—Charlottesville		
Public	1	
Workshop for the Blind		
Private	1	
Linville-Edom Sheltered Workshop		X
Planning Area IV—South Boston		
Public	0	
Private	1	
Lynchburg Sheltered Workshop		X
Planning Area V—Alexandria		
Public	0	
Private	1	
Northern Virginia Sheltered Occupational Center		X
Planning Area VI—Richmond		
Public	1	
Workshop for the Blind		X
Private	2	
Southside Sheltered Workshop		X
Richmond Goodwill Industries		X
Planning Area VII—Norfolk		
Public	0	
Private	3	
Tri-County Rehabilitation Workshop		X
Norfolk Goodwill Industries		X
Tidewater Vocational Center		X
Total	13	11

* Types of deficiencies and frequency of response: (1) Inadequate work space (mentioned six times); (2) Poor lighting (mentioned four times); (3) Inadequate loading facilities (mentioned three times); (4) Insufficient storage space (mentioned three times); (5) Generally obsolete buildings (mentioned three times); (6) Poor heating (mentioned two times); (7) Inadequate toilet facilities (mentioned two times); (8) Insufficient training stations (mentioned one time); (9) Poor floors (mentioned one time); (10) Poor cooling (mentioned one time).

obsolescence. Four of these workshops reported current equipment inprovement projects.

Potential client increases. Those workshops reporting physical plant and/or equipment improvement projects also expected substantial increases in the number of clients who could be served after completion of these projects. Altogether, service to 430 additional clients was expected by the workshops, with the greatest number of client increases (245, or 57 percent) in the "all types" disability classification. Potential client increases of 40 blind, 100 mentally retarded, and 45 with psychoses or personality disorders were also expected. It should be noted that potential client increases are greatest in planning areas II and VI. Provision of services are expected for 150 additional clients in Planning Area II and for 185 additional clients in Planning Area VI.

In evaluating workshops throughout the State, the knowledge and attitudes of counselors and supervisors in the Department of Vocational Rehabilitation and the Commission for the Visually Handicapped are extremely important. In examining these factors, however, it becomes clear that there are some critical problems affecting the relationships between agency personnel and the workshops.

Distance from workshops. Given the number of workshops in the State and their relative concentration within given planning areas, it is evident that substantial numbers of DVR and CVH counselors are quite distant from the nearest workshop (Table 4.57). Over half of the DVR counselors and nearly half of the CVH counselors are either somewhat distant or very distant from the nearest available workshop. The problem is extremely acute for DVR counselors in certain planning areas. In Planning Area I, all of the counselors are "very distant" (that is, 100 miles or more) from the nearest workshop. In Planning Area III, 89 percent of the counselors are "very distant" and 11 percent of the counselors are "somewhat distant" from the nearest workshop. It is only within Planning Area II, VI and VII that a majority of DVR counselors can be classified as "near" a workshop. The problems of distance are, of course, most directly related to the areas which these counselors serve. Since there are no residential facilities at the existing workshops, rehabilitation clients in Planning Area I, for example, are faced with rather formidable transportation and living problems if they are going to use workshops. The same problems, moreover, are faced by clients within all planning areas where substantial numbers of counselors are quite distant from workshops. The problem of distance affects the counselor's knowledge about existing workshops as well as his ability to use them for his clients. It is to be expected that the sheer physical separation between many counselors and the workshops does not serve to maximize the counselor's knowledge about the services and general conditions of workshops. Because it is difficult for many counselors to send their clients to workshops, the lack of general familiarity is reinforced by a lack of first-hand experience with workshops.

Recommendation (Interim 9): DVR should encourage and assist workshops and facilities to plan, develop, and initiate residential units for clients who are in need of such service.

Recommendation (Long Range 9): Initiate a master plan for the development and establishment of DVR operated half-way houses as transitional environments for the following client populations: (1) alcoholics, (2) public offenders, (3) transitional mentally ill and mentally retarded.

Potential and actual use of workshops. While distance is not the only factor involved, its effects are at least partially evident in the estimates by DVR and CVH counselors and supervisors of actual and potential use of workshops by their clients. In Table 4.59, for example, the disparity between actual and potential use of workshops as estimated by DVR and CVH counselors is quite evident. While 62 percent of the DVR counselors estimated moderate or high potential use of workshops, only 22 percent reported moderate to high actual use. In the case of CVH counselors, 68 percent estimated potential moderate or high use of workshops by their clients, but only 30 percent reported actual use at even the moderate level. In both agencies, then, the counselors' estimates of the number of their clients who actually use workshop services are substantially less than their estimates of the number of their clients who could use workshop services if those services were available.

In Tables 4.60 and 4.61, data show the actual and potential use estimates for different types of counselors and supervisors in DVR. These data make it clear that the disparity between actual and potential use of workshops is substantial according to the estimates of each of these subgroups, with the only real difference, being the size of the disparity. And what is most interesting is that the largest gap is revealed by the estimates of central office supervisors in DVR. All estimate moderate or high potential use, yet only 16 percent estimate actual use at both these levels.

What is indicated is the existence of a rather formidable gap between the actual and potential use of workshops by DVR and CVH counselors and supervisors. There are substantial numbers of clients in both agencies who, according to agency personnel, could use the services of a workshop if those services were available. From the estimates of actual use, however, it appears that those services are not available.

Evaluation of Workshops. Another factor which might affect the disparity between potential and actual use of workshops is the evaluation by agency personnel of their previous experience with workshops. According to the responses of counselors and supervisors in DVR and CVH, the evaluation of workshops is relatively poor.

In DVR, almost all of the supervisors who evaluated the workshops rated them as unfavorable in terms of services, staff, and the facilities available. Among all DVR counselors, 35 percent rated their experience with workshops as unfavorable while 38 percent provided a favorable evaluation. The least favorable estimate among the different types of counselors was made by school unit counselors, where 52 percent rated workshops in an unfavorable manner while only 24 percent considered them in favorable terms.

Among CVH personnel, the ratings were also negative. Forty-six percent of the CVH counselors and all of the CVH supervisors (the numbers here are too small to be significant but are included for completeness) rated the workshops as unfavorable, while only 31 percent of the counselors rated the workshops in favorable terms.

In general, then, counselors and supervisors in DVR and CVH are dissatisfied with the services, staff, and facilities of those workshops with whom they have had experience. It is plausible that this attitude is at least partially responsible for the minimal use of workshops by both agencies.

Most workshops within the State see the attainment of accreditation as outlined by the National Policy and Performance Council as an extremely formidable, if not impossible, task. It would appear that the most effective approach, indeed perhaps the only approach, lies in clearly defined stages and time tables. Workshop directors and their boards would welcome assistance in developing objective.

Recommendation (Interim 13): Provide assistance and guidance to workshops which are moving toward meeting the standards for workshop accreditation as outlined by the National Policy and Performance Council. In addition, DVR should advise workshops of these standards and develop additional standards, where necessary, for Virginia workshops.

If workshops are to provide services commensurate with the needs of rehabilitation agencies, they must receive additional financial support. Further, this support must be available in a consistent manner. This would allow workshops to engage in long range planning including acquisition of additional equipment and staff.

One method of providing support would be for the rehabilitation agencies to contract for case services in a minimal amount on a monthly basis. This would be, however, difficult for the agencies to do unless additional appropriations were made.

Recommendation (Action 5): Request the General Assembly to make an annual appropriation of

TABLE 4.55—Physical Plant Improvement Projects in Virginia Workshops

	Number of workshops	*Workshops reporting physical plant improvement projects*	
		Current	*Long-range*
Planning Area I—Abingdon			
Public	0		
Private	0		
Planning Area II—Roanoke			
Public	0		
Private	3		
Roanoke Valley Training Center		X	X
Roanoke Goodwill Industries			
E. L. Burgandine Sheltered Workshop			X
Planning Area III—Charlottesville			
Public	1		
Workshop for the Blind			
Private	1		
Linville-Edom Sheltered Workshop			X
Planning Area IV—South Boston			
Public	0		
Private	1		
Lynchburg Sheltered Workshop			
Planning Area V—Alexandria			
Public	0		
Private	1		
Northern Virginia Sheltered Occupational Center			X
Planning Area VI—Richmond			
Public	1		
Workshop for the Blind		X	
Private	2		
Southside Sheltered Workshop			
Richmond Goodwill Industries		X	X
Planning Area VII—Norfolk			
Public	0		
Private	3		
Tri-County Rehabilitation Workshop			
Norfolk Goodwill, Inc.		X	X
Tidewater Vocational Center			
Total	13	4	6

$175,000 to the Department of Vocational Rehabilitation to be used in the staffing and operation of private, non-profit sheltered workshops.

Summary. Substantial areas of the State have little, if any, access to workshops because they are concentrated in Planning Areas II, VI, and VII. The problem of distance would be lessened if residential facilities were available. Second, the workshops serve primarily mentally retarded clients (the two Workshops for the Blind excepted). True multi-disability workshops are extremely rare in Virginia. Third, most workshops provide essentially extended employment. While this is a function which workshops are expected to perform, the wages paid in many workshops are such as to raise questions about the efficacy of this function. According to figures provided by the workshops, eight workshops provide a minimum wage of

TABLE 4.56—Equipment Deficiencies in Virginia Workshops

	Number of workshops reporting equipment deficiencies	
	Obsolete equipment	*Number workshops reporting current equipment improvement projects*
Planning Area I—Abingdon		
Public		
Private		
Planning Area II—Roanoke		
Public		
Private		
Roanoke Valley Training Center	X	
Roanoke Goodwill Industries	X	
E. L. Burgandine Sheltered Workshop		
Planning Area III—Charlottesville		
Public		
Workshop for the Blind		
Private		
Linville-Edom Sheltered Workshop		
Planning Area IV—South Boston		
Public		
Private		
Lynchburg Sheltered Workshop		X
Planning Area V—Alexandria		
Public		
Private		
Northern Virginia Sheltered Occupational Center	X	X
Planning Area VI—Richmond		
Public		
Workshop for the Blind		X
Private		
Southside Sheltered Workshop		
Richmond Goodwill Industries	X	X
Planning Area VII—Norfolk		
Public		
Private		
Tri-County Rehabilitation Workshop		
Norfolk Goodwill, Inc.		
Tidewater Vocational Center		
Total	4	4

TABLE 4.57—Distance from Workshops of DVR and CVH Counselors

Distance	*DVR counselors*			*CVH counselors*	*Total all DVR counselors*
	Field	*School*	*Mental/ correctional*		
	%	%	%	%	%
Near(a)	39	64	42	54	45
Somewhat distant(b)	28	24	42	8	30
Very distant(c)	31	4	17	39	22
No answer	1	8	0	0	2
	99	100	101	101	99
N=	(74)	(25)	(24)	(13)	(123)

(a) Near is defined as in the same city or county.
(b) Somewhat distant is defined as within 50 miles.
(c) Very distant is defined as more than 100 miles.

SOURCE: The data in this and the following tables in this section are derived from counselor and supervisor surveys conducted in the period from September, 1967-February, 1968. These included the DVR Field Counselor Interview; the DVR School Unit Counselor Interview, the DVR Mental and Correctional Unit Counselor Interview; the DVR Supervisor Interview; and CVH Counselor Interview; and the CVH Supervisor Interview.

TABLE 4.58—Distance from Workshops of DVR Field Counselors

	Percent, by DVR Areas						
	I	*II*	*III*	*IV*	*V*	*VI*	*VII*
	%	%	%	%	%	%	%
Near Workshop	0	57	0	22	11	78	53
Somewhat distant from Workshop	0	29	11	44	67	12	40
Very distant from Workshop	100	0	89	33	22	11	7
No answer	0	0	0	0	0	0	0
	100%	100%	100%	99%	100%	101%	100%
N=	(7)	(7)	(9)	(9)	(9)	(18)	(15)

TABLE 4.59—DVR and CVH Counselor Estimates of Potential and Actual Use of Workshops by their Clients

Percentage of Clients— Use of Workshop Services	*DVR Counselors*		*CVH Counselors*	
	Actual use	*Potential use*	*Actual use*	*Potential use*
	%	%	%	%
Estimated Low Use (0-9%)	75	34	61	31
Estimated Moderate Use (10-29%)	11	42	30	8
Estimated High Use (30% or more)	11	20	0	60
No answer	4	5	8	0
	101%	101%	99%	99%
N=	(123)	(123)	(13)	(13)

TABLE 4.60—DVR Counselor and Supervisor Estimate of Clients who Could Use Services of Workshop If Available

	Counselors			Supervisors		
	Field	*School*	*Mental/ correctional*	*Central*	*Field*	*Total all counselors*
	%	%	%	%	%	%
Estimated Low Use (0-9%)	32	30	33	0	4	34
Estimated Moderate Use (10-29%)	53	24	30	62	27	42
Estimated High Use (30% or more)	11	24	38	39	44	20
No answer	4	12	0	0	27	5
	100%	100%	101%	101%	102%	101%
N=	(74)	(25)	(24)	(13)	(26)	(123)

TABLE 4.61—DVR Counselor and Supervisor Estimates of Actual Use of Workshops by DVR Clients

	Counselors			Supervisors		
	Field	*School*	*Mental/ correctional*	*Central*	*Field*	*Total all counselors*
	%	%	%	%	%	%
Estimated Low Use (0-9%)	72	84	75	77	31	75
Estimated Moderate Use (10-29%)	15	8	0	8	31	11
Estimated High Use (30% or more)	10	0	21	8	4	11
No answer	3	8	4	8	35	4
	100%	100%	100%	101%	101%	101%
N=	(74)	(25)	(24)	(13)	(26)	(123)

TABLE 4.62—Evaluation of Experience with Workshops by DVR Counselors and Supervisors

	Counselors			Supervisors		
	Field	*School*	*Mental/ correctional*	*Central*	*Field*	*Total all counselors*
	%	%	%	%	%	%
Unfavorable(a)	34	52	21	92	54	35
Favorable(b)	42	24	38	0	4	38
Inapplicable	12	12	33	8	0	16
No answer	12	12	8	0	42	11
	100%	100%	100%	100%	100%	100%
N=	(74)	(25)	(24)	(13)	(26)	(123)

(a) Includes those evaluating workshops as very unsatisfactory, unsatisfactory, or fair.
(b) Includes those evaluating workshops as good or very good.

TABLE 4.63—CVH Counselor and Supervisor Evaluation of Experience with Workshops

	Counselor	*Supervisor*
Unfavorable(a)	46	100
Favorable(b)	31	0
Inapplicable	8	0
No answer	15	0
	100%	100%
N=	(13)	(2)

(a) Includes those evaluating workshops as very unsatisfactory, unsatisfactory and fair

(b) Includes those evaluating workshops as good or very good.

less than $.25 per hour to their clients. Three workshops pay approximately $.75 per hour, while only two workshops pay a minimum hourly wage of over $1.00.[2] Fourth, the use of workshops by DVR and CVH is minimal, and operating agency personnel estimate substantial gaps between the number of clients who actually use workshops and the number who could benefit from workshop services. Fifth, the evaluation of workshops by DVR and CVH personnel is negative. Substantial numbers of counselors and most supervisors view the workshops in unfavorable terms.

Rehabilitation Facilities

Distance from facilities. As was the case for rehabilitation workshops, substantial numbers of counselors in DVR and CVH are quite distant from rehabilitation facilities. Fifty-eight percent of the DVR field counselors and 45 percent of the CVH counselors reported that they were either "somewhat distant" or "very distant" from the nearest rehabilitation facility. In the case of DVR field counselors, the problems were particularly acute in Planning Areas I, III, IV, and V where only a small number of counselors, ranging from none to about one-fifth, reported themselves as being "near" a rehabilitation facility. The problem of distance is of somewhat lesser importance in dealing with rehabilitation facilities than with workshops. At Woodrow Wilson Rehabilitation Center, for example, there are residential facilities which allow the Center to serve clients from throughout the State. However, it should be noted that many of the facilities are unit operations (school, mental, and correctional) which serve only clients from the particular institutions with which they have cooperative agreements.

Potential and actual use of rehabilitation facilities. It is not surprising, therefore, that counselors and supervisors in CVH and DVR reported rather significant differences in the numbers of clients who actually use and those who could use the services of a rehabilitation facility. Among DVR field counselors, 86 percent reported moderate or high potential use of rehabilitation facilities by their clients, while only 50 percent reported actual use which could be classified as moderate or high. DVR central office and field supervisors also reported large gaps between potential and actual use. Eighty-five percent of the CVH counselors reported moderate or high potential use of

TABLE 4.64—Distance from Rehabilitation Facilities of DVR and CVH Counselors*

	Field DVR counselors	*CVH counselors*
	%	%
Near(a)	41	54
Somewhat distant(b)	22	15
Very distant(c)	36	30
No answer	2	0
	101%	99%
N=	(74)	(13)

* Does not include the comprehensive center. In relation to WWRC, 85 percent of the DVR field counselors, 80 percent of the school unit counselors, 62 percent of the mental and correctional unit counselors, and 84 percent of the CVH counselors are at least fifty miles distant. And of this number, nearly three-fourths are more than 100 miles away.

(a) "Near" is defined as within the same county or city.

(b) "Somewhat distant" is defined as within fifty miles.

(c) "Very distant" is defined as more than 100 miles.

SOURCE: The data in this and the following tables in this Section are derived from counselor and supervisor surveys conducted in the period September, 1967-February, 1968. These included the DVR Field Counselor Interview; the DVR School Unit Counselor Interview; the DVR Mental and Correctional Unit Counselor Interview; the DVR Supervisor Interview; the CVH Counselor Interview; and the CVH Supervisor Interview.

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[2] When asked about their maximum hourly wages, seven workshops could not provide a figure. Among the remainder, three reported paying a maximum of over $1.50 per hour, while three others reported a maximum of approximately $.50 per hour. In addition, there was a disparity in the minimum wage figures reported by two workshops, because of the distinction between minimum wage and minimum production wage. The minimum wages have been reported here.

rehabilitation facilities, while 54 percent estimated actual use at these levels.

Similar gaps were revealed in the counselors' and supervisors' estimates of actual and potential use of a comprehensive rehabilitation center. Forty-eight percent of the DVR counselors estimated a potential for high use of a comprehensive center, yet only 12 percent reported actual high use by their clients. Among CVH counselors, 93 percent estimated a potential for high use, but only 15 percent reported actual high use. Similar differences, particularly in the high use category, emerged from the estimates provided by DVR central office supervisors and field counselors. Sixty-nine percent of the central office supervisors, for example estimated potential high use of a comprehensive rehabilitation center, but only 15 percent reported actual use at the high level. According to agency personnel, then, the potential for use of rehabilitation facilities and a comprehensive rehabilitation center is substantially greater than current actual use. Large numbers of counselors and supervisors, for example, believe that at least 30 percent of the clients of DVR and CVH could use the services of rehabilitation facilities and a comprehensive center, yet few report this number of clients actually use these services.

Recommendation (Action 1): Increase the number of disabled Virginians served at Woodrow Wilson Rehabilitation Center.

Recommendation (Soon 2): Continue the rebuilding program at Woodrow Wilson Rehabilitation Center. Appropriate the necessary funds for planning of a new medical building.

Evaluation of experience with rehabilitation facilities. The CVH and DVR counselor and supervisor evaluations of previous experience with rehabilitation facilities are relatively favorable. Fifty-five percent of all DVR counselors and 54 percent of CVH counselors rated the rehabilitation facilities in favorable terms. Among central office DVR supervisors, however, the evaluation was distinctly unfavorable. Sixty-two percent of these supervisors evaluated the rehabilitation facilities in unfavorable terms, while only 31 percent responded in favorable terms.

The evaluation of the comprehensive rehabilitation center is favorable among all groups. Of the DVR personnel, 73 percent of the field counselors, 72 percent of the school unit counselors, 67 percent of the mental and correctional unit counselors, 85 percent of the central office supervisors, and 66 percent of the field supervisors rated the comprehensive center in favorable terms. Of equal importance, less than one-fourth of the responses in any sub-group were unfavorable.

The evaluation of rehabilitation facilities by counselors and supervisors in DVR and CVH contrasts sharply with the evaluation of workshops. Among supervisors in both agencies, workshop evaluations were quite negative and among counselors, negative responses were almost a majority.

Summary. While agency personnel view rehabilitation facilities much more positively than rehabilitation workshops, the data which have been presented reveal some important problems. There are, first, large areas of the State in which no rehabilitation facility exists. Second, many rehabilitation facilities serve only particular types of clients, such as those in schools or in mental and correctional institutions. While the utility of the unit operations is not questioned, many of the clients who are now being served and who will, in the future, be served by rehabilitation

TABLE 4.65—Distance from Rehabilitation Facilities of DVR Field Counselors*

	I	*II*	*III*	*IV*	*V*	*VI*	*VII*
	%	%	%	%	%	%	%
Near(a)	0	57	22	22	22	72	47
Somewhat distant(b)	0	14	0	11	44	17	46
Very distant(c)	100	14	77	66	22	11	7
No answer	0	14	0	0	11	0	0
	100%	99%	99%	99%	99%	100%	100%
N=	(7)	(7)	(9)	(9)	(9)	(18)	(15)

* Does not include WWRC

(a) "Near Workshop" is defined as within the same county or city.

(b) "Somewhat distant from Workshop" is defined as within fifty miles.

(c) "Very distant from Workshop" is defined as more than 100 miles.

TABLE 4.66—DVR and CVH Counselor and DVR Supervisor Estimate of Clients Who Could Use Services of Rehabilitation Facility if Available.

	DVR Field Counselors	*DVR Supervisors*		*CVH Counselors*
		Central	*Field*	
	%	%	%	%
Estimated Low Use (0-9%)	8	0	8	8
Estimated Moderate Use (10-29%)	50	23	23	23
Estimated High Use (30% or more)	36	77	39	62
No answer	7	0	31	8
	101%	100%	101%	101%
N=	(74)	(13)	(26)	(13)

TABLE 4.67—DVR and CVH Counselor and DVR Supervisor Estimates of Actual Use of Rehabilitation Facilities by DVR Clients

	DVR Field Counselors	*DVR Supervisors*		*CVH Counselors*
		Central	*Field*	
	%	%	%	%
Estimated Low Use (0-9%)	43	46	15	46
Estimated Moderate Use (10-29%)	35	23	38	46
Estimated High Use (30% or more)	15	23	8	8
No answer	5	8	38	0
	98%	100%	99%	100%
N=	(74)	(13)	(26)	(13)

TABLE 4.68—DVR and CVH Counselor and DVR Supervisor Estimate of Clients Who Could Use Services of Comprehensive Rehabilitation Center if Available

	DVR Field Counselors	*DVR Supervisors*		*CVH Counselors*
		Central	*Field*	
	%	%	%	%
Estimated Low Use (0-9%)	11	0	0	0
Estimated Moderate Use (10-29%)	38	31	20	8
Estimated High Use (30% or more)	48	69	50	93
No answer	3	0	30	0
	100%	100%	100%	101%
N=	(74)	(13)	(26)	(13)

TABLE 4.69—DVR and CVH Counselor and DVR Supervisor Estimates of Actual Use of Comprehensive Rehabilitation Center by DVR Clients

	DVR Field Counselors	*DVR Supervisors*		*CVH Counselors*
		Central	*Field*	
	%	%	%	%
Estimated Low Use (0-9%)	39	38	15	54
Estimated Moderate Use (10-29%)	46	38	35	30
Estimated High Use (30% or more)	12	15	20	15
No answer	3	8	31	0
	100%	99%	101%	99%
N=	(74)	(13)	(26)	(13)

TABLE 4.70—Evaluation of Experience with Rehabilitation Facilities by DVR Counselors and Supervisors

	Counselors			*Supervisors*		*Total all counselors*
	Field	*School*	*Mental/ correctional*	*Central*	*Field*	
	%	%	%	%	%	%
Unfavorable(a)	29	32	13	62	23	28
Favorable(b)	55	44	63	31	35	55
Inapplicable	4	4	17	8	0	7
No answer	11	20	8	0	42	11
	99%	100%	101%	101%	99%	101%
N=	(74)	(25)	(24)	(13)	(26)	(123)

(a) Includes those evaluating workshops as very unsatisfactory, unsatisfactory or fair.
(b) Includes those evaluating workshops as good or very good.

TABLE 4.71—CVH Counselor and Supervisor Evaluation of Experience with Rehabilitation Facilities

	Counselors	*Supervisors*
	%	%
Unfavorable(a)	31	0
Favorable(b)	54	100
Inapplicable	8	0
No answer	8	0
	101%	100%
N=	(13)	(2)

(a) Includes those evaluating workshops as very unsatisfactory, unsatisfactory or fair.
(b) Includes those evaluating workshops as good or very good.

TABLE 4.72—Evaluation of Experience with Comprehensive Rehabilitation Centers by DVR Counselors and Supervisors

	Counselors			*Supervisors*		*Total all counselors*
	Field	*School*	*Mental/ correctional*	*Central*	*Field*	
	%	%	%	%	%	%
Unfavorable(a)	23	12	16	15	19	19
Favorable(b)	73	72	67	85	66	71
Inapplicable	0	4	4	0	4	2
No answer	4	12	13	0	12	7
	100%	100%	100%	100%	101%	99%
N=	(74)	(25)	(24)	(13)	(26)	(123)

(a) Includes those evaluating workshops as very unsatisfactory, unsatisfactory or fair.
(b) Includes those evaluating workshops as good or very good.

facilities, are institutional clients. This means that facility expansion has two components. Cooperative units can be established or expanded to serve increasing numbers of clients in institutions. However, general rehabilitation facilities are needed to serve clients drawn from the non-institutional population. As the estimates by DVR field counselors indicated, substantial numbers of these clients are, at present, not being served by rehabilitation facilities.

In the aggregate, the services and staff of the rehabilitation facilities are relatively adequate. As the rehabilitation facilities' responses indicated, however, many facilities have substantial physical plant and equipment deficiencies. If remedied, this could produce a significant increase in the number of clients who might be served.

Many rehabilitation facilities, particularly the unit operations, serve specialized age groups. In many instances, services are provided to clients between sixteen and twenty-one years of age. While this is to be expected because of the nature of the units, the age groups served by other facilities indicate that older clients, those over fifty-five, are served at rather minimal levels by the existing rehabilitation facilities. In facilities serving the general population there is a need for provision of services to a greater number of older clients.

Recommendation (Interim 2): Develop Tidewater Rehabilitation Institute into a comprehensive rehabilitation center, to include vocational training and residential facilities.

Recommendation (Interim 3): Develop National Orthopaedic and Rehabilitation Hospital into a comprehensive rehabilitation center, to include vocational training and residential facilities.

Recommendation (Interim 1): Establish a regional comprehensive rehabilitation center in the Abingdon DVR administrative area.

Recommendation (Long Range 1): Establish a regional comprehensive rehabilitation center in each of the following DVR administrative areas: Roanoke, South Boston, and Richmond.

Need for Rehabilitation Resources

Estimates of Need. In order to provide reliable estimates of current and future needs for workshop, rehabilitation facility, and comprehensive center services, it is necessary to use these related estimates: (1) estimates of disability incidence and prevalence, (2) estimates of the ratio of severely limiting disabilities to total disabilities within given disability categories, and (3) estimates of need for given types of services within given disability categories.

The estimates of disability incidence and prevalence used in this report are derived from Report No. 11 of the Series, "Vocational Rehabilitation In Virginia" (*Estimation and Projection of Disability Incidence and Prevalence in Virginia*). In addition, the ratio of severely limiting disabilities to total disabilities within given categories has also been derived from Report No. 12. Finally, the estimates of need for given types of services within specific disability categories were obtained through a survey of rehabilitation counselors conducted in March 1968.

In interpreting the data reported in this section, several assumptions should be noted. The estimates of total incidence and the ratio of severely limiting incidence to total incidence within any given disability category should be viewed as *estimates.* There are a number of different estimates provided in Report No. 11, and the same qualifications noted in that report apply to the figures reported here. Second, the relevant population used here is that between the ages of sixteen and sixty-four. This represents the most feasible "age-eligible" population in terms of all disabilities. For particular disabilities, especially mental retardation, however, the feasible "age-eligible" population should be expected to differ. Finally rehabilitation counselors have information relating to a specific population—those persons referred to the agency.

First, the estimates of total incidence reported here are based upon survey data and, in some cases, national estimates adjusted to Virginia's population. The latter estimates were used for incidence estimates of mental retardation, alcoholism, drug addiction, epilepsy, and respiratory disabilities. Second, for ratio of severely limiting incidence to total incidence where the estimates are based upon community survey data, the figures represent the number of disabilities within a given disability category resulting in severe major activity limitations. (Major activities include working, keeping house, and attending school.) Where the total incidence figures are derived from national estimates, no estimate of severe limitation is provided, with the exception of mental retardation, alcoholism, and drug addiction. For estimates of these last three disability types, ratios obtained from the community survey data for the relevant disability types have been used. Third, persons with severe major activity limitations between the ages of sixteen and sixty-four have been used as the specific population group. This group, therefore, does not represent all disabled persons in the State who might need and be eligible for vocational rehabilitation services. The group does represent the most severely disabled persons in the State who in all probability need and are eligible for vocational rehabilitation services. Fourth, the DVR counselor estimates represent their appraisal of the need for given services among DVR clients only. These estimates, however, have been applied to the persons in the State suffering from severe major activity limitations. Therefore, the estimated need for services among this group is, in all probability, higher than the counselor estimates reported.

The estimated needs reported here probably are low (conservative) estimates. If Virginia is going to provide the necessary rehabilitation services to all the disabled who need them, it must expand workshop, facility, and center services beyond the needs estimated here. What is reported here is the irreducible minimum of what must be done.

Workshop services. During fiscal year 1967, all workshops in Virginia served 942 persons. The estimated need in 1968 by selected disability categories—excluding persons in the "other personality disorders," "digestive system," "genito-urinary system," "respiratory system," and "epilepsy" categories —is 21,707 (See Table 4.84).

According to the National Health Survey, persons with the most severe form of activity limitation experience an average of 1.9 limiting chronic conditions.[1] Applying this figure to the number of severely limiting chronic disabilities reported above provides an estimate of 11,425 persons needing workshop services. Thus, workshops in Virginia are providing, at the maximum (since only selected disabilities have been used), services for about 8 percent of the persons in the State who need workshop services. Workshops in Virginia reported current and long-range improvement projects which would increase client service by 430 persons. If all of these projects were completed during 1968, it would mean that workshops could provide services to about 12 percent of the most severely disabled persons who need workshop services. Further, this would apply only to the selected disabilities for which figures are reported.

It is apparent that the existing workshops in Virginia are grossly inadequate in a number of respects. As Report No. 1 (*Rehabilitation Workshops, Facilities, Resources in Virginia*) showed, the focus, equipment, and staff of most workshops are inadequate. According to the minimum estimates provided here, the capacities of existing workshops cannot provide services for the disabled population who could use the services.

It is also worth noting that existing workshops in Virginia generally serve the mentally retarded. (This does not include, of course, the two Workshops for the Blind.) While the estimated number needing workshop services is greatest for the mentally retarded, substantial need exists also among the physical, sensory, and psychosocial disability categories. Workshop expansion, therefore, should be approached in terms of all disability types.

If the figures shown here are projected to 1975 on the basis of expected population growth, there will be approximately a 10 percent increase in the number of persons needing workshop services. This increase alone is greater than the capacity of Virginia's workshop and only slightly less than the projected capacity based on short-term and long-term improvement

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[1] U.S. Department of Health, Education, and Welfare, *Chronic Conditions and Activity Limitations* (Washington D.C., 1965), p. 3.

projects. It is also more than five times as great as the current annual turnover in workshop clients.

In order to meet the minimum needs noted here, workshop capacity in Virginia must be increased by 11,625 clients in the next seven years. Further, new workshops must be better equipped, staffed, and directed than most present workshops. If these needs are to be met, greater efforts by the State, the rehabilitation agencies, and local communities are necessary. In particular, the Department of Vocational Rehabilitation should take the lead in encouraging local communities to build workshops, in providing technical assistance to the communities, in getting universities throughout the State to establish training programs for workshop personnel, and in assuring that workshops of the proper type are established in areas where they are most needed.

Rehabilitation facility and comprehensive center services. During fiscal year 1967, rehabilitation facilities in Virginia (with the exception of Woodrow Wilson Rehabilitation Center) reported serving 4,840 clients. Again excluding the disability categories for which no reliable estimates of incidence and/or reliable estimates of the ratio of severely limiting total disabilities (other personality disorders, digestive system disorders, genito-urinary system disorders, respiratory system disorders, and epilepsy), the estimated need in 1968 for selected disability categories is 34,348. Again applying the 1.9 average of limiting chronic conditions, the estimated number of persons needing rehabilitation facility services is approximately 18,078 (See Table 4.74).

The Woodrow Wilson Rehabilitation Center reported serving 1,472 clients during fiscal year 1967. Applying the counselor estimates to the severely limited incidence estimates and using the 1.9 average chronic conditions per person yields a figure of 12,170 persons needing comprehensive center services in 1968 (See Table 4.75).

The estimates of persons needing rehabilitation facility or comprehensive center services are additive. Therefore, there are approximately 23,936 persons in the State within the selected disability categories indicated in Tables 4.74 and 4.75 who could use the services of rehabilitation facilities or comprehensive centers. Expected increases from short-term and long-range physical plant and equipment improvement projects are expected to be 1,912 clients. Adding this to 1967 rehabilitation facility and comprehensive center service would provide a figure of 8,224. Even when current and long-range expansions are completed, facility services for only about 35 percent of the persons needing these services would be available. Again, this percentage relates only to persons in selected disability categories whose disabilities result in severe major activity limitations.

Summary. The existing workshops in the State provide services to only a small fraction of the number of disabled who need workshop services. Further, since turnover in the existing workshops is only about 20 percent annually, considerable expansion in the client service capacities of most existing workshops would not be possible. In order to meet the minimum demonstrated needs, expansion of the more adequate workshops and the establishment of new workshops would have to result in an expanded workshop capacity of 11,625 clients in the next seven years.

Rehabilitation facilities in Virginia are, in general, more adequate in terms of staff, equipment, and physical plant than workshops. Nevertheless, rehabilitation facilities and the comprehensive center can provide services for approximately one-third of the disabled in selected disabled categories needing such services even when current and long-range expansions in existing facilities are needed. In order to meet the minimum needs, capacities of rehabilitation facilities and comprehensive centers will have to increase to 26,329 persons by 1975. This would mean an increase of 20,017 over the number of clients served in fiscal year 1967.

Programs: Caseloads and Expenditures[1]

Caseload Data

Caseload data can be deceiving. Large increases in particular years or for particular parts of an agency's program could mean the agency has an excellent program. But, it also could mean an agency has such an inadequate program that a desperate effort is neces-

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[1] **Unless another source is sited, all data utilized in this section are from the appropriate fiscal year of these publications: United States Department of Health, Education, and Welfare, Social Rehabilitation Service, Rehabilitation Services Administration, Division of Statistics and Studies, *Caseload Statistics State Vocational Rehabilitation Agencies* (Washington, D.C.); United States Department of Health, Education, and Welfare. Social Rehabilitation Service, Rehabilitation Services Administration, *State Vocational Rehabilitation Agency Program Data* (Washington, D.C.); United States Department of Health, Education, and Welfare, Social Rehabilitation Service, Rehabilitation Services Administration, *Characteristics and Trends of Clients Rehabilitated in Fiscal Year 1963-1967* (Washington, D.C.: March 1968). Throughout this report the former will be cited as *Caseload Statistics,* with appropriate fiscal year noted parenthetically, and the latter will be cited as *Program Data,* with appropriate fiscal year noted parenthetically,**

TABLE 4.73—Estimated Need for Workshop Services By Selected Disability Categories; Severe Limitations Only, 1968 Population, Sixteen to Sixty-four Years

Type of Impairment	*Estimated Incidence (Severe Major Activity Limitation)*	*Estimated Percent Needing Workshop Services*(b)	*Estimated Number Needing Services*
Visual impairments	5,428(a)	8.3	451
Hearing impairments	3,256(a)	11.4	371
Orthopedic impairments	30,396(a)	17.6	5,350
Amputations	2,171(a)	10.9	237
Psychosis and neurosis	3,256(a)	28.2	918
Mental retardation	23,120(c)	41.0(e)	9,479
Alcoholism	19,389(c)	13.0	2,521
Drug Addiction	269(c)	10.3	277
Cardiac and circulatory	9,770(a)	16.9	1,651
Speech impairments	4,342(a)	10.4	452
Digestive system	(d)	4.4	(d)
Genito-urinary	(d)	2.4	(d)
Respiratory	(d)	13.5	(d)
Epilepsy	(d)	28.1	(d)
Other personality disorders	(d)	16.9	(d)

(a) These figures are derived from Report No. 11 of the series "Vocational Rehabilitation in Virginia," ***Estimation and Projection of Disability Incidence and Prevalence in Virginia.*** **(Charlottesville: Institute of Government, July 1968)**

(b) Estimates shown were provided by DVR counselors. The figures reported represent the average of counselor estimates for each disability.

(c) The total incidence figures used in these estimates are derived from national estimates. See Report No. 11, ***op. cit.*** **The ratio using 26.9 percent which is based on ratios for these disability types provided by the community surveys.**

(d) There are no estimates of the ratio of severely limiting to total disabilities for these groups.

(e) This represents the average of counselor estimates.

sary to reach a standard of performance or coverage which was available in other states or agencies years earlier. Similarly, a large number of cases might indicate an excellent program, or it might indicate too great an emphasis on the quantity of services being offered with too little emphasis on the quality of those services.

If these limitations are kept in mind, caseload data are helpful in assessing current program output and in establishing trends in the directions of programs and funding requirements. Also, they help make possible comparisons which place the adequacies and inadequacies of vocational rehabilitation's services to people in proper perspective.

Cases Accepted, Served, and Rehabilitated in Fiscal Year 1967

In the 1967 fiscal year, the two public vocational rehabilitation agencies in Virginia accepted 7,574 new cases, served a total of 13,731 cases, and rehabilitated 5,458 cases. In the State, the Virginia Commission for the Visually Handicapped (CVH) mainly serves that portion of the vocational rehabilitation caseload which is legally blind while the Virginia Department of Vocational Rehabilitation (DVR) serves the remainder. The division of labor

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and ***Characteristics and Trends.*** **(For the years prior to 1967, of course, the Rehabilitation Services Administration was named the Vocational Rehabilitation Administration and its publications before 1967 are so designated).**

Region III of the United States Department of Health, Education, and Welfare currently includes the District of Columbia, Kentucky, Maryland, North Carolina, Puerto Rico, Virginia, the Virgin Islands, and West Virginia. However, throughout this section "Department of Health, Education, and Welfare Region III" includes only Virginia, the District of Columbia, Kentucky, Maryland, North Carolina, and West Virginia. Two practical problems—presentation and the possibility of meaningful comparison dictate this definition.

A detailed presentation of data included in this section is given in Report No. 8, ***Recent Vocational Rehabilitation Caseload Data,*** **in the series, "Vocational Rehabilitation in Virginia" (Charlottesville: The Institute of Government, 1968,** ***mimeo*****).**

TABLE 4.74—Estimated Need for Rehabilitation Facility Services By Selected Disability Categories; Severe Limitations Only, 1968 Population, Sixteen to Sixty-four Years

Type of Impairment	*Estimated Incidence (Severe Major Activity Limitation)*	*Estimated Percent Needing Services*(b)	*Estimated Number Needing Services*
Visual impairments	5,428(a)	22.8	1,237
Hearing impairments	3,256(a)	32.2	1,048
Orthopedic impairments	30,396(a)	33.8	10,274
Amputations	2,171(a)	35.4	768
Psychosis and neurosis	3,256(a)	36.0	1,172
Mental retardation	23,120(c)	28.9(e)	6,682
Alcoholism	19,389(c)	42.3	8,202
Drug Addiction	269(c)	35.2	95
Cardiac and circulatory	9,770(a)	35.9	3,507
Speech impairments	4,342(a)	31.4	1,363
Digestive system	(d)	38.9	(d)
Genito-urinary	(d)	33.7	(d)
Respiratory	(d)	35.8	(d)
Epilepsy	(d)	30.4	(d)
Other personality disorders	(d)	34.9	(d)

(a) These figures are derived from Report No. 11 of the Series "Vocational Rehabilitation in Virginia," *Estimation and Projection of Disability Incidence and Prevalence in Virginia.*

(b) Estimates shown were provided by DVR counselors. The figures reported represent the average of counselor estimates for each disability.

(c) The total incidence figures used in these estimates are derived from national estimates. See report No. 11, *op. cit.* The ratio of severe limitation disabilities to total disabilities is derived by using 26.9 percent which is based on ratios for these disability types provided by the community surveys.

(d) There are no estimates of the ratio of severely limiting to total disabilities for these groups.

(e) This represents the average of counselor estimates.

between the two agencies in 1967 was approximately 95 percent (DVR) to 5 percent (CVH) in terms of cases accepted, served, and rehabilitated. The State rate of rehabilitations per 100,000 population was 121. DVR and CVH share proportionately in that rate.

Total Caseload Movement in Fiscal Year 1967

DVR moved a total of 14,294 cases and CVH a total of 688 cases from referral to applicant status during the year.[2] The two agencies processed a combined total of 14,108 cases. Of these, 2 percent went into extended evaluation, 53 percent became part of the active caseload, 23 percent were closed from referral, and 22 percent were closed from application. DVR was more likely to use extended evaluation than CVH and more likely to close the case at the applicant stage. This latter point probably can be accounted for by the fact that CVH was more likely to close a case at the referral stage. (The different clientele of the two agencies probably helps explain this variation. CVH tends to know more about the nature of the client's disability and feasibility at early referral than DVR.)

Among the cases remaining at the end of the year, DVR had moved a much larger proportion to the applicant stage. Over one-half of CVH's cases remaining at the end of the year were still at the referral stage.

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[2] Under the 1965 Amendments to the Vocational Rehabilitation Act a distinction was made between "referral status" and "applicant status." Currently, "referral status" refers to the earliest contact with a potential client when a minimum amount of information is known about him. "Applicant status" refers to the stage the potential client has reached since he has signed a document requesting vocational rehabilitation services. For an explanation, see United States Department of Health, Education, and Welfare, Social Rehabilitation Service, Rehabilitation Services Administration, Division of Statistics and Studies, *Caseload Statistics State Vocational Rehabilitation Agencies Fiscal Year 1967* (Washington, D.C.: December 1967), p. 1.

Table 4.75—Estimated Need for Comprehensive Center Services By Selected Disability Categories; Severe Limitations Only, 1968 Population Sixteen to Sixty-four Years

Type of Impairment	*Estimated Incidence (Severe Major Activity Limitation)*	*Estimated Percent Needing Services*(b)	*Estimated Number Needing Services*
Visual impairments	5,428(a)	13.1	711
Hearing impairments	3,256(a)	15.7	511
Orthopedic impairments	30,396(a)	25.0	7,599
Amputations	2,171(a)	26.3	570
Psychosis and neurosis	3,256(a)	26.5	862
Mental retardation	23,120	27.4(e)	6,335
Alcoholism	19,389(c)	18.3	3,548
Drug addiction	269(c)	15.4	41
Cardiac and circulatory	9,770(a)	19.7	1,925
Speech impairments	4,342(a)	23.5	1,020
Digestive system	(d)	9.4	(d)
Genito-urinary	(d)	8.1	(d)
Respiratory	(d)	19.8	(d)
Epilepsy	(d)	31.1	(d)
Other personality disorders	(d)	29.5	(d)

(a) These figures are derived from Report No. 11 of the Series "Vocational Rehabilitation in Virginia,"—*Estimation and Projection of Disability Incidence and Prevalence in Virginia,* (Charlottesville: Institute of Government, July 1968).

(b) Estimates shown were provided by DVR counselors. The figures reported represent the average of counselor estimates for each disability.

(c) The total incidence figures used in these estimates are derived from national estimates. See Report No. 11, *op. cit.* The ratio of severe limitation disabilities to total disabilities is derived by using 26.9 percent which is based on ratios for these disability types provided by the community surveys.

(d) There are no estimates of the ratio of severely limiting to total disabilities for these groups.

(e) This represents the average of counselor estimates.

By the end of the year, the agencies had handled 13,731 active cases. Almost one-half of these had been processed and were either rehabilitated and closed (39.7 percent of active cases) or were closed without being rehabilitated (7.7 percent). A little over one-half of the active cases remained on the books at the end of the year.

The public vocational rehabilitation agencies in Virginia processed 68 percent of the referral cases available during fiscal year 1967. CVH received 66 percent and processed 59 percent of its available referred cases whereas DVR received 83 percent and processed 68 percent of its available referred cases.

During 1967 DVR and CVH accepted 54 percent and 56 percent respectively, of their combined referrals and extended evaluation cases into their active caseloads.

Status of Active Caseload at the End of the Fiscal Year 1967

At the end of the fiscal year DVR had 6,764 cases on hand and CVH had 444. In both agencies half or more of these were not ready for employment and plans had not been initiated for about another one-fourth. Each agency had around 10 percent ready for employment and another 10 percent in employment (but not closed).

How Caseloads in Virginia Compared to the Region and U.S.

During the year Virginia served a caseload of a rate of 305 per 100,000 population for a ranking of twenty-seventh nationally, and the State rehabilitated clients at the rate of 121 per 100,000 population for a ranking of sixteenth nationally. *On both measures Virginia ranked the lowest of any state in the Department of Health, Education, and Welfare Region III.*

DVR processed 13,316 cases and CVH processed 792 cases during fiscal year 1967. Of the cases processed, both agencies put over one-half into the active caseload. In this category DVR's rate (52.9 percent) was almost exactly the United States' rate 52.5 percent). When compared to other states in the Department of Health, Education, and Welfare Region III, Virginia DVR put a smaller proportion of the proposed cases into active caseload than any other state, except West Virginia (51.0 percent) and Kentucky (43.6 percent). The District of Columbia put 83 percent of its processed cases into active caseload, Maryland put 63 percent, and North Carolina put 61 percent. In closing cases from referral, Virginia DVR (22.6 percent) was closed to the national rate (24.7 percent). Other states in the Department of Health, Education, and Welfare Region III ranged from Kentucky's high of 43.2 percent to North Carolina's low of 13.4 percent for this category of cases processed. In closing cases at the applicant stage, Virginia DVR (22.3 percent) again was close to the national proportion (20.6 percent). Among the other states in the Department of Health, Education, and Welfare Region III, only North Carolina closed a larger proportion (24.9 percent) from referral; whereas the other states ranged from Kentucky's 13 percent to Maryland's 16 percent. When the number of cases closed from referral are added to the number closed from applicant, Virginia DVR ranks third among the general agencies in the Department of Health, Education, and Welfare Region III in closing processed cases.

In the first full year of use (under the changes in the 1965 amendments to the Vocational Rehabilitation Act) Virginia DVR used extended evaluation for a relatively large number of cases. In the use of the extended evaluation procedure Virginia CVH varies from the national norm in case processing. CVH used it less than was the case in the United States generally, or in North Carolina (the other state in the Department of Health, Education, and Welfare Region III having a separate agency for the blind). Consequently, Virginia's CVH put a considerably larger proportion of the processed cases in the active caseload than did North Carolina.

Only North Carolina and Kentucky DVR's reported a larger proportion of their active caseloads closed rehabilitated than Virginia. Among the general agencies of the Department of Health, Education, and Welfare Region III, only North Carolina and Maryland reported a smaller proportion of closed but not rehabilitated cases.

Virginia CVH reported a larger percentage (37.3 percent) of closed rehabilitated cases than the agency for the blind in North Carolina (33.6 percent) or the United States (29.3 percent).

Except for West Virginia, in fiscal year 1967 Virginia received a similar proportion of the referred cases available for the entire year as the other states in the Department of Health, Education, and Welfare Region III. Along with North Carolina and Maryland, however, Virginia was able to process a relatively small proportion of the available referred cases. Virginia ranked fourth in the region in the percent of combined referral and extended evaluation cases processed and accepted in 1967. The active caseloads of both Virginia DVR and Virginia CVH remaining at the end of the year were concentrated in the "not ready for employment" status. From 20 to 25 percent of their active caseloads remanied in the "plan not yet initiated" status. An equal proportion was ready for employment or was already in employment. These distributions were not generally dissimilar to the national distribution.

In the region, the District of Columbia and West Virginia had unusually large proportions in statuses 10 and 12 ("plan not yet initiated"). North Carolina and Kentucky had a disproportionate number in statuses 14-18 and 24 ("not ready for employment").

Trends in Cases Accepted, 1954-1967

When measured as the percent increase over the previous year, Virginia's increase in rate of acceptance has fluctuated more than the national increase. The State's increase in 1963 over 1962 was at about the national rate, then the increase in 1964 was greater than the national increase in cases accepted. But, in 1965 and 1966, Virginia's rate of acceptance did not increase very much while the national increase was considerable. In 1967, Virginia increased in cases accepted by almost 30 percent. In fact, among the units in the Department of Health, Education, and Welfare Region III, Virginia ranked third in 1967 in percent increase over 1965 in accepting cases. The State had ranked fourth among the six states in 1966.

Comparing the increase from 1954 to 1965 and from 1954 to 1967, probably is a better method of measuring the trends in accepting cases. (In 1954 and 1965 substantial Congressional changes in the amendments to the Vocational Rehabilitation Act created better conditions for accepting cases.) In Virginia the cases accepted in fiscal year 1965 showed an increase of 81 percent over 1954. This is a sizeable increase; however *it only served to rank Virginia sixth among the six states in the Department of Health, Education, and Welfare Region III.* The other states in the region showed very large increases in comparison to Virginia's. For example, Kentucky's increase was 618 percent and the District of Columbia's was 341 percent. Even West Virginia, which had a large program before 1954, increased its cases accepted by 93 percent.

During the longer period, 1954 to 1967, Virginia moved up to fifth in ranking. But, this was only at the expense of West Virginia which had a much larger program in 1954. Hence, this measure may be misleading. *The fact is: by most measures Virginia ranked poorly among the states in the Department of Health, Education, and Welfare Region III in increase in cases accepted over the entire period, and the State's increase was considerably below the national increase.*

The overall increase in cases accepted from 1954 to 1967 was remarkable in all the state agencies in the Department of Health, Education, and Welfare Region III. The range is from a 96 percent increase for West Virginia to a 745 percent increase in Kentucky for the period. Virginia Department of Vocational Rehabilitation's was 133 percent. This gave Virginia ranking of fifth among the six general agencies in the region. This compared unfavorably with the national increase of 258 percent as well.

By 1967 the Virginia Commission for the Visually Handicapped's increase over 1954 of cases accepted was 440 percent. The national increase during the period was 121 percent. North Carolina, the only other state in the Department of Health, Education, and Welfare Region III having a separate agency for the blind, increased its acceptance 82 percent during the period. *The Virginia Commission for the Visually Handicapped's dramatic gain was tempered by the fact that the agency handled an extremely small caseload in 1954.*

Trends in Cases Served, 1954-1967

Virginia increased the number of cases served during the 1963-1967 period through small increments. In four of the five years the increase over the previous year in cases served was below the national increase. Also, Virginia's increases usually were less than those of states in the Department of Health, Education, and Welfare Region III which had expanding programs. (However, the Virginia increases exceeded those of states such as West Virginia which had large caseloads in proportion to its population.)

A comparison of the increases in 1963 over 1954 showed all the states in the Department of Health, Education, and Welfare Region III clustered in a rather narrow range from a 75 percent increase in Virginia to a 129 percent increase in the District of Columbia. But, the 1965 increases over 1954 indicated a large increase in the District of Columbia (193 percent) and Kentucky (345 percent) with the remaining states clustered closely in range, retaining the same relative position, and increasing in line with the continuing fast growth on rate of cases served. Kentucky's pattern was one of growth, but the cases served per 100,000 was still relatively low because of the very low rate served in the State in 1961. Even though its program had leveled off in terms of growth, the vocational rehabilitation program in North Carolina continued to serve clients at a high rate because its program operated at a high level over the entire period. Even though Maryland's program showed recent growth at a faster pace than Virginia's, it did not grow with the rapidity of the Kentucky, the District of Columbia and West Virginia programs. So, on a regional basis, Maryland and Virginia's programs compared unfavorably with the other programs.

The seriousness of the implications of relatively slow growth in cases served is presented in Table 1. In the cases of West Virginia and the District of Columbia, the programs exceeded the national trend. The 1967 increase in cases served over 1954 was quite dramatic in the District of Columbia (1,019 percent); Kentucky (440 percent); and West Virginia (402 percent). Maryland also made a sizeable (188 percent) gain and moved above the national increase (170 percent). Only North Carolina showed less increase from 1954 to 1967 than from 1954 to 1965. (That State, of course, had a larger program in 1954 than several states in the region.) Other than North Carolina, Virginia was the only state in the group to continue its increase at the same rate during the period.

When Virginia's rate and rank in cases served per

TABLE 4.76—Four Types of State Growth Patterns in Cases Served in Department of Health, Education, and Welfare Region III.

% increase of 1967 over 1954	*Number of cases served per 100,000*	
	Low (305-365)	*High (417-888)*
High (402%-1019%)	Kentucky	D.C. West Virginia
Low (106%-188%)	Maryland Virginia	North Carolina

100,000 is compared, it is clear the State has been losing ground nationally in recent years. Nationally, the State dropped from a rank of thirteenth in 1960 to twenty-seventh in 1967. This does not mean that Virginia's rate of cases served has dropped. On the contrary, the State's rate went up from 226 to 305 cases served per 100,000 population over the 1960-1967 period. Yet this increase was not competitive nationally nor regionally. Whereas Virginia ranked fourth in the Department of Health, Education, and Welfare Region III, in 1960, the State ranked sixth in 1967. (Very large gains in rates of cases served occurred in Kentucky, Maryland, the District of Columbia and West Virginia.)

Virginia DVR's recent yearly increases in cases served were roughly similar to the State totals discussed previously. The overall growth from 1954 to 1965 for DVR was a bit less than the State's; 72 percent compared to 79 percent. The same is true for the 1954 to 1967 period—99 percent increase for DVR compared to 106 percent for the State.

In 1954 CVH served a very small clientele numbering only 132 cases. By 1965 the number totaled 517; by 1967 the total was 758. In overall growth the CVH program grew faster than the national program.

During fiscal year 1967 CVH served 758 cases, a 30 percent increase over fiscal year 1966 when it served 581 cases. CVH has exceeded the national trend in the increase of cases served in each year since 1963, except for 1964, when CVH's increase was 6 percent compared to the United States' increase of 8 percent. In recent years CVH also has increased the number of cases being served at a much faster rate than North Carolina (the only other state in the Department of Health, Education, and Welfare Region III having a separate agency for the blind).

Trends in Rehabilitation, 1954-1967

Even though Virginia's public vocational rehabilitation agencies increased their total rehabilitations over 100 percent from 1954 to 1963, this placed Virginia fifth among the states in the Department of Health, Education, and Welfare Region III. By 1965 Virginia dropped to sixth, then in 1967 Virginia moved back to fifth. But, in neither 1965 nor 1967 did Virginia's increase in rehabilitants over 1954 equal the national increase.

The year by year increase in the 1963-1967 period shows Virginia actually decreasing, rather than increasing the number of rehabilitants in 1965. In 1966 and 1967, modest increases occurred and these exceeded the national increase slightly for each year.

It should be noted that recently Virginia's increase in the number of rehabilitants has compared favorably with the United States' increase and the regional increase. Both in 1966 and 1967 Virginia ranked third in the region in percent increase over 1965.

A survey, in terms of the number of rehabilitations per 100,000 population in the State, shows Virginia steadily losing ground in the regional rankings. The rate of eighty-two rehabilitants per 100,000 population placed Virginia third among the jurisdictions in the Department of Health, Education, and Welfare Region III. *This position steadily deteriorated, and by 1967, Virginia ranked last.* This was due to the very substantial increase which several of the states in the region showed. In the region, only Virginia had a net increase from 1960 to 1967 in the number of rehabilitants per 100,000 population which was similar to the United States' net increase. The other states showed greater increases.

Virginia was the only state in the region which showed a consistent loss in national ranking on number of rehabilitants per 100,000 during the 1960's. Virginia dropped from a ranking of eighth nationally to sixteenth during the period. In the Department of Health, Education, and Welfare Region III, only West Virginia and North Carolina ranked above Virginia in 1960; by 1967 all jurisdictions in the region ranked above Virginia in rate of rehabilitations per 100,000 of the State's population.

The only variations from statewide totals in the percent increase of rehabilitations over 1954 were in Virginia and North Carolina, where the blind rehabilitants are handled through a separate agency. For 1963, 1965, and 1967, the North Carolina general agency was rehabilitating at a faster rate than the agency for the blind; hence the increases for North Carolina's general agency are larger than the State increase over 1954. In Virginia, the converse is true; each year the general agency's increases over 1954 are smaller than the State's increases.

Since 1960, the Virginia Commission for the Visually Handicapped program has increased at a rate greater than the national increases every year except 1962.

When a number of rehabilitations per 100,000 population are compared, it is clear that Virginia made progress in recent years. By 1967, CVH ranked eleventh among the thirty-seven state agencies for the blind in rehabilitations per 100,000. This was a marked change from its rank of seventeenth just five years before. While the increase in the number rehabilitated per 100,000 in 1967 increased 144 percent over 1954 in the United States, it increased 502 percent in Virginia.

Summary of Caseload Trends

A review of the caseload data for fiscal year 1967 shows the Virginia Department of Vocational Rehabilitation (DVR) and the Virginia Commission for the Visually Handicapped (CVH) dividing the vocational rehabilitation caseload on a ninety-five to five ratio, respectively. Both agencies had a significant backlog of cases at the end of the fiscal year.

In the Department of Health, Education, and Welfare Region III, Virginia ranked lowest in accepting and serving cases. In comparison to other jurisdictions represented in the Department of Health, Education, and Welfare Region III, Virginia accepted a relatively small proportion of her processed cases into active caseload, closed a disproportionately large number of cases from referral, and was able to process a relatively small proportion of the referred cases available. Although ranking poorly in the Department of Health, Education, and Welfare Region III on these aspects of total caseload movement, Virginia was close to the national average on several of the measures of total caseload movement. Also, DVR had a relatively large number of clients in extended evaluation in 1967 and this tended to lower the State's ranking on caseload movement.

Even though Virginia has made sizable increases very recently in cases accepted, the State ranks sixth among the six units in the Department of Health, Education, and Welfare Region III in increases in cases accepted from 1954 to 1967. The State increase also was below the national average increase for the period. Of the two public vocational rehabilitation agencies in Virginia, CVH showed larger increase in cases accepted on both regional and national comparisons. (It started from a very small base in 1954, and in part this accounts for its large increase.)

In 1960, Virginia ranked thirteenth nationally in cases served per 100,000 population; by 1967 the State dropped to twenty-seventh. This is the poorest record of any state in the Department of Health, Education, and Welfare Region III. Not only was Virginia's trend on cases served per 100,000 population poor, the State also ranked low on the increase in percentage served during the period.

Virginia increased the total number of rehabilitations in the 1954-1967 period, but not at national or regional rates. In fact, from 1964 to 1965 the State actually showed a decrease in total number of clients rehabilitated. Virginia was the only state in the Department of Health, Education, and Welfare Region III to show a consistent loss in national ranking on the number of rehabilitants per 100,000 population, dropping from eighth nationally in 1960 to sixteenth in 1967. In the Department of Health, Education, and Welfare Region III, only West Virginia and North Carolina ranked above Virginia in 1960; by 1967 all jurisdictions in the region ranked above Virginia.

In recent years, however, Virginia's increase in the number of rehabilitants compared favorably with the United States and regional increase. Both in 1966 and 1967, the State ranked third in the region in percent increase over 1965. In 1963 CVH ranked seventeenth nationally in the number of rehabilitations per 100,000 but in 1967 CVH ranked eleventh.

The overall picture which emerges from analyses of caseload data for public vocational rehabilitation in Virginia is this: the program has grown in recent years; nevertheless, the Virginia program still does not compare favorably to the region nor the nation. *The reasons for this difficulty arose during the period in which various components of the program in Virginia failed to keep pace with the increased emphasis such programs were receiving in other states.*

Recent State Expenditure for Vocational Rehabilitation[3]

The vocational rehabilitation program in Virginia, has expanded significantly within the past several years. Since vocational rehabilitation is a federal-state program, the major changes in scope have come primarily through changes in federal legislation. The first Vocational Rehabilitation Act was passed in 1920. Under this Act, grants were provided to the states for limited services in vocational training, counseling, and placement. The 1920 Act was extended or renewed in its original form several times, and it was finally made "permanent" as Title V, part 4 of the Social Security Act of 1935. During this period, the emphasis was upon vocational education for the physically handicapped. In 1943, however, under Public Law 113, services were extended to the mentally handicapped as well as the physically handicapped, and the concept of rehabilitation services was broadened to include physical restoration services. Public Law 113 also brought the separate state agencies serving the blind into the federal-state vocational rehabilitation program.

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[3] For detailed information about this subject see Report No. 4, *Expenditures for Vocational Rehabilitation in Virginia, 1963-1967,* in the series "Vocational Rehabilitation in Virginia," (Charlottesville: Institute of Government, June 1968, *mimeo.*)

In 1954, Public Law 565 provided for substantial expansion in the vocational rehabilitation program. Under this Act, amendments to the Vocational Rehabilitation Act authorized grant programs for research and training, provided for specialized rehabilitation facilities, and significantly expanded the types of services which could be provided for individuals under the program.

Of more immediate relevance, however, were the Vocational Rehabilitation Act Amendments of 1965 (Public Law 89-333). Under these amendments, federal participation in the program was expanded considerably, and substantial changes in the scope of the program were also effected. The major sections of the 1965 Amendments related to: (1) basic support grants; (2) workshop improvement grants; (3) grants for construction of workshops and rehabilitation facilities; (4) initial staffing grants for workshops and rehabilitation facilities; (5) project grants and assistance for workshops and rehabilitation facilities; (6) grants for comprehensive statewide planning for vocational rehabilitation services; (7) state planning grants for workshops and facilities; (8) grants for expansion of vocational rehabilitation services; (9) payment of costs of vocational rehabilitation services to disability beneficiaries from the Social Security Trust Funds; and (10) grants to states for innovation of vocational rehabilitation services. Under this Act, it was possible for the states to expand their vocational rehabilitation programs in terms of the volume of services provided, the number of eligible clients served, the quality and effectiveness of services, and the development of workshops and rehabilitation facilities.

The 1965 Amendments, then, provide the essential context within which the vocational rehabilitation programs of the states can be analyzed.[4] In particular, the appropriations, under the 1965 Act provided for substantial increases in state allotments over a three year period. Section 2 (Basic Support) funds, for example, were appropriated in the amount of $300 million in fiscal year 1966, $350 million in fiscal year 1967, and $400 million in fiscal year 1968.

Despite the increase in federal funds available for vocational rehabilitation programs in the states, *Virginia has been unable to utilize its full allotment of federal funds.* In the period since 1963, Virginia has utilized less than one-half of the federal funds which have been allotted to the State (Table 4.77). It should be noted that the federal expenditures listed here are total federal expenditures, while the allotments are for Section 2 only. Included in the federal expenditures, in addition to Section 2 federal funds, are the other federal funds received and used by the Department through special grants and program. Because of this, the percentage of federal funds unused, in each case, is a conservative figure. The difference between Section 2 allotments and Section 2 expenditures would be greater than is indicated by Table 2.

Despite the fact that State expenditures for vocational rehabilitation increased by 106.6 percent in the period from fiscal year 1963 through fiscal year 1967, with a per capita expenditure increase of 91.3 percent increase over the same period, it was not until fiscal year 1967 that Virginia's rank in per capita state expenditures increased (Table 4.78). In fiscal year 1967, Virginia's rank in total expenditures, for vocational rehabilitation, per capita in the State ranked twenty-fifth in the nation. State funds expended per capita ranked thirtieth in the nation.

Despite the fact that rehabilitation agencies in Virginia have been unable to utilize fully the allotments of federal fund during the past several years, there have been rather substantial increases in the vocational rehabilitation program in the State during this period. In particular, the increased allotments under the 1965 Act have resulted in greatly increased expenditures by the rehabilitation agencies in the State.

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[4] There are a number of related federal acts which are also related to the vocational rehabilitation program, although none are as basic to the program as the legislation noted above. Included among these are: (1) Public Law 89-178, The Correctional Rehabilitation Study Act, which authorized grants for research and study in correctional rehabilitation, including education and training of persons in the field of correctional rehabilitation; (2) Public Law 88-605, which allows third-party funds (private) to be used as matching funds for the establishment of workshops and rehabilitation facilities; (3) Public Law 74-732, the Randolph-Sheppard Vending Stand Act, which provides that licensed and qualified blind persons be given preference to operate vending stands on federal and other property; (4) Public Law 88-413, Rehabilitation Facilities Construction, which authorizes the construction and modernization for public or non-profit hospitals and other medical facilities; (5) Disability Benefits Provisions of the Social Security Act, which authorizes vocational rehabilitation services for persons applying for disability benefits under OASI (Old Age Survivor's Insurance); (6) Rehabilitation of Social Security Beneficiaries (Public Law 89-97 Amendments to the Social Security Act), which authorizes funds for rehabilitation services to social security disability beneficiaries; (7) Public Law 87-453, Public Welfare Amendments of 1962, which provides for use of vocational rehabilitation services for welfare assistance recipients or applicants; (8) Public Law 88-352, Title VI, The Civil Rights Act of 1964, which prohibits discrimination in the vocational rehabilitation program.

Table 4.77—Section 2 Federal Funds Allotted to and Used by Virginia Rehabilitation Agencies, 1963-1967*

Fiscal year	*Federal funds allotted* (a)	*Federal funds spent* (b)	*Amount federal funds unused*	*Percent of available federal funds spent*
1963	$3,322,474	$1,614,685	$1,707,789	48.6
1964	4,296,481	1,874,561	2,421,920	43.6
1965	5,432,830	2,116,624	3,316,206	39.0
1966	7,168,480	3,178,743	3,989,737	44.3
1967	9,215,025	5,045,188	4,169,837	54.7

* Includes CVH and DVR; Section 2 funds only.

(a) Source: Office of the Commissioner, Virginia DVR.

(b) Source: U.S. H.E.W., V.R.A., *State Agency Program Data,* 1963-1967.

Table 4.78—State Funds Expended by Virginia Rehabilitation Agencies, 1963-1967

Fiscal year	*Total*	*Per capita*	*Rank per capita*
1963	813,778	.195	35
1964	941,786	.217	39
1965	1,063,400	.243	42
1966	1,312,276	.294	37
1967	1,681,729	.373	30

Source: U.S., H.E.W., V.R.A., *State Agency Program Data,* 1963-1967.

Comparing Virginia to the other states in Region III, it is clear that the real expansion of the Virginia program was in fiscal years 1966 and 1967. From fiscal year 1963-1965, the increase in rehabilitation agency expenditures in Virginia was 31.8 percent. This was the second smallest increase among the states of Region III and was also lower than the increase for the nation. In the period from 1965-1967, however, expenditures by rehabilitation agencies in Virginia increased by 110.1 percent. This was the second largest percentage increase in the region, being surpassed only by the 150 percent increase for Maryland. The Virginia increase was also substantially above the national increase.

The use of per capita expenditures provides a more meaningful measure of program expansion. When these figures are used, Virginia has percentage increases in the periods 1963-1965 and 1965-1967 which are, in comparative terms, quite similar to the total expenditure figures. Thus, from 1963-1965, Virginia's per capita expenditures increase was 24.7 percent. This was the second smallest increase in Region III and greater than the national increase. Despite the rather substantial percentage increases, however, Virginia's per capita expenditures remained low relative to other states. In 1963, Virginia ranked thirtieth in per capita expenditures. By 1967, despite the fact that per capita expenditures in the State had nearly tripled, the state ranked twenty-seventh. Among the states in Region III, Virginia ranked higher than Maryland and Kentucky, but lower than North Carolina, West Virginia and the District of Columbia.

Just as total and per capita agency expenditures in the State increased substantially in the period from 1963-1967, the numbers of cases served and rehabilitated also increased. In terms of the number of cases served per 100,000 population by rehabilitation agencies in the State, the figures for Virginia show a percentage increase of 11.1 percent for 1963-1965 and 13.3 percent for 1965-1967. Despite these increases, however, Virginia's rank dropped from seventeenth to twenty-seventh during the same period. Compared to the other states in Region III, Virginia also ranked quite low. Virginia's rehabilitation agencies served 305 cases per 100,000 population in fiscal year 1967, while West Virginia served 838 cases and the District of Columbia served 748 cases per 100,000 population.

Virginia's ranking in the number of cases rehabilitated per 100,000 population also dropped in the period from 1963-1967. While the percentage increase in rehabilitations per 100,000 population from 1965-1967 was greater in Virginia than for the nation, the number of rehabilitations per 100,000 remained low relative to the other states in Region III. In the District of Columbia, for example, almost twice as many rehabilitations per 100,000 population were achieved. Compared to the states in Region III, Virginia's rehabilitation rate per 100,000 population was lowest.

As is evident from the expenditures increases and number of rehabilitations, Virginia's program expenditures have increased at a much higher rate than have rehabilitations. What has occurred is that the average cost per rehabilitation in Virginia has increased more rapidly during the period from 1963-1967 than has average cost per rehabilitation nationally, or for any of the states in Region III, with the exception of West Virginia. The average cost per rehabilitation in Virginia was $1,232 in fiscal year 1967 which represented a 94.3 percent increase over fiscal year 1963. The national increase during the same period was 70.4 percent. Nevertheless, Virginia's average cost per rehabilitation in fiscal year 1967 was approximately 30 percent less than the national average. In fiscal year 1963, Virginia's average rehabilitation cost was 61.7 percent of the national average. While Virginia's average rehabilitation cost remains substantially below national averages, there has been a relative improvement during the past five years. Moreover, with the exception of West Virginia, Virginia spent substantially more per rehabilitation than any of the states within Region III.

The category of program expenditures which showed the largest percentage increase since 1963 was guidance and placement. In 1965, guidance and placement accounted for 20.5 percent of the total expenditures of Virginia's rehabilitation agencies. In fiscal year 1967, guidance and placement expenditures accounted for 34.2 percent of total expenditures. At the same time, case service expenditures decreased from 74.6 percent of total expenditures in fiscal year 1965 to 43.6 percent of total expenditures in fiscal year 1967.

The increase in guidance and placement expenditures is largely the result of expansion in the counseling program. From fiscal year 1963 through fiscal year 1965, counseling man-years in Virginia's rehabilitation agencies increased only slightly, from 55.0 to 47.1. In fiscal year 1967, however, counseling man-years in Virginia had increased to 132.7 which represented a 124.3 percent increase over fiscal year 1965.

The relatively large increase in the number of counselors during the past three years resulted in Virginia's improving its rank in terms of population per counselor. In fiscal year 1965, there was one counselor per 76,538 people in the State, and Virginia's national rank was thirty-eighth. In fiscal year 1967, however, there was one counselor for every 33,964 persons in the State, and this ratio was eighteenth in the nation.

As noted above, case service expenditures represented 74.6 percent of total expenditures by Virginia rehabilitation agencies in fiscal year 1965 and 53.6 percent of total expenditures in fiscal year 1967. During this period, case service expenditures increased from $2,186,838 to $3,607,030. The percentage increase, however, was only 64.9 percent compared to a 110.1 percent increase in total expenditures. In terms of particular types of case service expenditures remained relatively constant during the past three years. The only substantial changes occurred in hospital and convalescent care, training and training materials, and rehabilitation and adjustment center services. In fiscal year 1965, costs of hospital and convalescent care costs represented 29.9 percent of total case service expenditures. In fiscal year 1967, this type of service accounted for 24.2 percent of total case service expenditures. During the same period, case service costs at rehabilitation and adjustment centers rose from 26.9 percent to 29.2 percent of total case service expenditures, while training and training materials costs increased from 11.6 percent to 13.9 percent of case service expenditures. Compared to national averages, Virginia's expenditures for given case services as percentages of total case service expenditures differed in a number of categories. In fiscal year 1967, hospital and convalescent care costs accounted for 24.2 percent of case service expenditures in Virginia; the national average was 8.7 percent. Training and training materials represented 13.9 percent of Virginia's case service expenditures; the national average for training and training materials was 25.3 percent. Maintenance and transportation costs also represented a substantially lower percentage of case service expenditures than was the case for national averages. Differences also occurred in the expenditures for workshop services and rehabilitation facility case services were higher in Virginia than the national average. Workshop services, on the other hand, accounted for only 0.6 percent of case service expenditures in Virginia, but for 5.7 percent of case service expenditures nationally.

With two exceptions, the average costs of given case services in Virginia were lower than the national averages in fiscal year 1967. In some cases—diagnostic procedures, prosthetic appliances, and tools, equipment, and licenses—the differences were relatively minor. For training and training materials and for rehabilitation and adjustment center services, Virginia's average service costs were substantially higher than the national average. For surgery and treatment, maintenance and transportation, and workshops services, however, Virginia's average service cost was represented by rehabilitation and adjustment centers. Case services at these facilities were purchased for 1,057 clients in fiscal year 1967 at an average cost of $995. As noted above, the average cost in this instance was above the national average of $747. It was also the second highest in the states shown for Region III but was significantly less than the average costs reported by West Virginia.

Expenditures of Virginia's Vocational Rehabilitation Agencies

Since fiscal year 1965, DVR's total expenditures have increased at a somewhat higher rate than have CVH's total expenditures. During the period from fiscal year 1965 through fiscal year 1967, total expenditures for DVR increased by 111.8 percent while total expenditures for CVH increased by 94.8 percent. The growth rates for both DVR and CVH, moreover, were above the national averages for general agencies and agencies for the blind. In Region III, North Carolina provides the only comparison for both agencies, and, in these terms, both Virginia agencies spent substantially less than their North Carolina counterparts in fiscal year 1967. This occurred despite the higher growth rates for Virginia agencies in comparison to the general agency and agency for the blind in North Carolina.

In both the Department of Vocational Rehabilitation and the Commission for the Visually Handicapped, the average cost per rehabilitation increased significantly during the three year period from fiscal year 1965 through fiscal year 1967. For DVR, the average cost per rehabilitation was $732 in fiscal year 1965; in fiscal year 1967, the average cost was $1,183. This represented an increase of 61.6 percent, which was the greatest increase in Region III and slightly above the national average. For CVH, the increase was 30.0 percent, which was equal to the national average. *It should be noted, however, that the average cost per rehabilitation in both agencies was substantially below the national average.* In the case of DVR, the average cost per rehabilitation in fiscal year 1967 represented 70.0 percent of the national average for general agencies. CVH, which reported an average cost per rehabilitation of $2,137 in fiscal year 1967, spent 66.1 percent of the national average for the rehabilitation of blind clients.

As noted above, the increase in total expenditures for DVR and CVH has been particularly high since the 1965 Amendments went into effect. With the increased appropriations under the 1965 Amendments, expenditures by both agencies increased in fiscal year 1966 and fiscal year 1967. The types of expenditures which increased, however, differed between CVH and DVR. In fiscal year 1965, guidance and placement represented 20.2 percent of DVR's total expenditures. By fiscal year 1967, guidance and placement had risen to 35.2 percent of total expenditures. During the same period, case service expenditures declined from 76.2 percent to 54.8 percent of total expenditures. Increases in other types of expenditures were relatively small. As a percentage of total expenditures, administration expenditures increased by 2.0 percent, rehabilitation facility expenditures increased by 2.7 percent, and workshop expenditures increased by 1.7 percent.

For CVH, the type of expenditure showing the greatest increase from fiscal year 1965 through fiscal year 1967 was that for small business enterprises. This increased from 9.1 percent of total expenditures to 25.4 percent of total expenditures. As a percentage of total expenditures during the same period, administration costs remained the same; guidance and placement increased by 0.8 percent; case service costs decreased by 17.6 percent; and rehabilitation facility and workshop costs remained the same.

The increase in guidance and placement expenditures as part of DVR's program represents, among other factors, a growth in the number of counselors in the agency. While the number of counselors (represented by counselor man-years) increased by only 1.5 percent from fiscal year 1963 through fiscal year 1965, the increase in the period from fiscal year 1965 through fiscal year 1967 was 67.7 man-years (or 131.7 percent). While the percentage increase in CVH counselors during the same period was even higher, the number of counselors involved was relatively small and did not significantly affect the guidance and placement expenditures. It should be noted that DVR had, in fiscal year 1967, the greatest number of counselor man-years among general agencies in Region III. Moreover, while the average case service expenditures per counselor increased nationally and in most general agencies in Region III in the period from fiscal year 1965 through fiscal year 1967, the case service expenditures per counselor decreased by 34 percent in DVR and by 42 percent in CVH over the same period.

In the period from fiscal year 1965 through fiscal year 1967, both DVR and CVH reported decreases in case service expenditures as a percentage of total expenditures. Thus, in fiscal year 1965, case services represented over three-fourths of DVR's total expenditures, while in fiscal year 1967, case services accounted for approximately 55 percent of total agency expenditures. For CVH, case service expenditures as a percentage of total expenditures decreased from 59 percent in fiscal year 1965 to 42 percent in fiscal year 1967.

Despite the relative decrease in case service expenditures, particular case services remained fairly constant when measured as a percentage of total case service expenditures. For DVR, case service costs for hospital and convalescent care have been decreased slightly since fiscal year 1965 as a percentage of total case service expenditures, while case service costs at rehabilitation and adjustment centers have shown a relative increase. For CVH's total case service expenditures, the relative amounts for training and training materials, diagnostic procedures, surgery and treatment, prosthetic appliances, and hospital and convalescent care increased slightly from fiscal year 1965 through fiscal year 1967, while the expenditures for maintenance and transportation, and rehabilitation and adjustment centers showed relative decreases.[5]

Summary

Under the 1965 Amendments to the Vocational Rehabilitation Act, the vocational rehabilitation program in Virginia has undergone significant expansion. In the three year period from fiscal year 1965 through fiscal year 1967, expenditures by rehabilitation agencies in the State increased by 110.1 percent. During the same period, per capita expenditures increased by 105.6 percent. Both these increases exceeded the national averages for rehabilitation agencies.

Despite the increases in program expenditures, rehabilitation agencies in Virginia have been unable to utilize fully the federal funds which have been allotted to the State. From fiscal year 1965 through fiscal year 1967, for example, only about one-half of the federal funds allotted to the State have been used. Thus, continuing program expansion will depend upon greater use of federal funds, and this will depend, in turn, upon increased State appropriations. It should be noted that in fiscal year 1967, Virginia ranked twenty-fifth in the nation in per capita expenditure of federal funds but thirtieth in the nation in per capita expenditure of State funds for vocational rehabilitation.

Increased expenditures have been accompanied by increases in the numbers of clients served and rehabilitated by Virginia's rehabilitation agencies. In the period from fiscal year 1965 through fiscal year 1967, the number of cases served by the Department of Vocational Rehabilitation increased by 15 percent, while the number of cases rehabilitated increased by 32 percent. The Commission for the Visually Handicapped increased its caseload during this period by 47 percent and its rehabilitations by 50 percent.

More important, perhaps, than the increases in client services has been the development of staff and resource capabilities which can provide the basis for greater increases in client services. DVR and CVH increased their counseling staffs by more than 130 percent in the period from fiscal year 1965 through fiscal year 1967. In terms of man-years, DVR had the greatest number of counselors of any general agency in Region III in fiscal year 1967.

The growth in counseling staff of Virginia's rehabilitation agencies was reflected in the relative increase of guidance and placement as part of total expenditures. In particular, guidance and placement increased from 20.2 percent to 35.2 percent of DVR's total expenditures in the period from fiscal year 1965 through fiscal year 1967.

The expansion of resource capabilities is also reflected in federal grants to public and private workshops and facilities in the State. According to information supplied by the Region III Office of the Department of Health, Education, and Welfare, $263,100 in federal grants to privately-owned workshops and facilities were made during the three fiscal years, 1966 through 1968. These grants covered project development and workshop improvement and were awarded to nine workshops and facilities in the State.

In addition, $643,700 in federal grants were awarded to DVR under training, research and development, innovation, and planning grants. Moreover, an application for $177,707 in federal matching funds for a project grant which would provide training allowances to DVR clients has been approved by the State Board of Vocational Rehabilitation and has been submitted to the Rehabilitation Services Administration.

In the period from fiscal year 1966 through fiscal year 1968, CVH has received $234,610 in federal grants for training, project development, research and demonstration projects, and construction. Thus, a total of $878,310 has been provided for Virginia's rehabilitation agencies during the three-year period from 1966 through 1968.

There have been, then, important changes in

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[5] Under the SSDI program, Virginia's rehabilitation agencies received $144,179 in fiscal year 1967. Most of this (88.7 percent) went for case services. Increased use of social security funds and public welfare funds to pay for rehabilitation costs for eligible clients can be expected. DVR's 1968 estimate, for example, is $200,300.

Virginia's vocational rehabilitation program during the past several years, and many of these changes are the result of the increased participation of the federal government in the vocational rehabilitation program under the 1965 Amendments. Nevertheless, a major part of the expansion of the Virginia program involves the development of staff and resource capabilities, and in order for the Virginia program to compare favorably with rehabilitation programs in other states, further development and expansion of these capabilities will be necessary.

Despite the striking increases in the Virginia vocational rehabilitation program during the past several years, Virginia continues to lag behind many states in a number of important dimensions. As noted above, Virginia ranked only thirtieth in per capita state expenditures and twenty-seventh in per capita total expenditures in fiscal year 1967. Second, while Virginia ranked sixteenth in rehabilitations per 100,000 in fiscal year 1967, it ranked twenty-seventh in cases served per 100,000. Third, average costs per rehabilitation in both DVR and CVH were well below national averages. Fourth, while Virginia's average expenditure for rehabilitation facility services was above the national average, its average cost of workshop services were significantly lower than national averages. Virginia compares more favorably when guidance and placement expenditures, growth in counselor staff, and population per counselor are examined. In fiscal year 1967 the percentage of total expenditures for guidance and placement in the Virginia program was above the national average. In addition, Virginia ranked eighteenth in population per counselor, with one counselor per 33,964 population compared to the national average of one counselor per 41,892 population. Counseling man-years for the Virginia program in fiscal year 1967 were above those reported for other states in Region III.

In general, it appears that Virginia's rehabilitation agencies have been moving in the right direction, particularly in terms of developing staff and guidance and placement capabilities. *There are, however, some rather severe restrictions imposed by lack of appropriations and particular resources, such as workshops.* Increased appropriations, development of needed resources, and continued expansion in staff capabilities are needed if the State is to improve its position in terms of client services in the future. Agency estimates for fiscal year 1968 indicate that expansion is taking place. Total expenditures for DVR and CVH in fiscal year 1968 are estimated at approximately $9.2 million. This is a substantial increase over fiscal year 1967 expenditures. *Nevertheless, continued expansion will be necessary if vocational rehabilitation services are to be made available to all handicapped persons by 1975.*

Recommendation (Immediate 5): Increase DVR's client service capacity to provide for the rehabilitation of 7,800 clients in fiscal year 1969 and 9,200 clients in fiscal year 1970.

Recommendation (Action 9): Provide State appropriations to pay the employer's cost of Social Security, retirement and insurance for DVR employees, (DVR now must assume this, instead of the Virginia Supplemental Retirement System, as was previously done).

Recommendation (Long Range 5): Expand VR personnel of CVH to meet all needs by 1975.

Recommendation (Long Range 3): Increase appropriations for CVH in order to serve more clients.

The costs of serving the severely disabled are included as part of the operating expenses for the planned comprehensive rehabilitation centers. It is estimated that the average cost per client in each center will approximate $1,600. If each center serves 1,800 clients per year, this will result in case service costs of approximately $2.88 million per center per year. The case service costs will cover approximately 95 percent of the total operating costs of each center. Thus, the costs for serving the severely disabled are a part of the comprehensive center plan developed for serving the needs of all disabled persons.

Recommendation (Interim 5): Increase the funding of DVR and CVH in order that the severely disabled can be served.

Related Programs

Through its involvement with a number of specific recipient population groups, the vocational rehabilitation program in Virginia has established, and is continuing to establish, ties to other agencies within the general context of related programs. Related programs involving vocational rehabilitation include a number of agency relationships which differ in terms of the nature of the agreements and the scope of the programs. The basic objective of related programs in terms of their relationship to vocational rehabilitation is to provide comprehensive services for particular population groups which need and are eligible for rehabilitation services.

In general, related programs of an inter-agency nature primarily involve the Department of Vocational Rehabilitation (DVR). DVR has established a number of differing relationships with other agencies, both State and Federal. The related programs in which the Commission for the Visually Handicapped (CVH) is involved are generally those between the vocational rehabilitation section of CVH and other departments within the agency. While the nature and scope of these programs are considered, they are essentially intra-agency programs.

There are a number of particular arrangements which characterize DVR's relationship to related programs. First, there are cooperative agreements involving facilities between DVR and other agencies. Second, there are general agency cooperative agreements. Third, there are special assignments of DVR personnel to other agencies. Fourth, there are the agencies—public and private—which are involved in DVR's referral network. Fifth, there is the Social Security Disability Beneficiary Program.

Cooperative Agreements Involving Facilities

Under cooperative agreements with other agencies, DVR operates eleven rehabilitation facilities. These include five school units which have been established in the Albemarle County, Harrisonburg-Rockingham, Alexandria, Fairfax, and Richmond school systems (school unit programs have recently been established in cooperation with the Chesapeake and Roanoke County school systems but will not be fully operative until the fall of 1968). In each of these cases, cooperative agreements are signed with the local school system in which the unit is to be established. In addition, there are four rehabilitation facilities which have been established at correctional institutions. These include the units at Beaumont, Bon Air, the Natural Bridge Forestry Camp and the Federal Reformatory at Petersburg. The first three have been established through cooperative agreements between DVR and the Virginia Department of Welfare and Institutions. The rehabilitation unit at the Federal Reformatory is covered by a cooperative agreement between DVR and the institution and was established through an Expansion Grant. Thus, the costs of this unit are covered through fiscal year 1969 on a 90:10 matching basis. DVR has also established two rehabilitation facilities at Western State Hospital and Central State Hospital. (A similar unit is now being established at Eastern State Hospital.) These units were established through cooperative agreements between DVR and the Virginia Department of Mental Hygiene and Hospitals.

Under a cooperative agreement with the Virginia Department of Health, DVR has agreed to establish vocational rehabilitation programs in two tuberculosis hospitals. These include the Blue Ridge Sanatorium and the Catawba Sanatorium. While the agreement has been signed, the programs have not yet been established.

General Agency Cooperative Agreements

There are also formal agreements with public agencies which define the relationship between DVR and these agencies. First, there is a cooperative agreement between DVR and the Virginia Employment Commission which covers, among other topics, the cross-referral of clients needing the services of either agency, the MDTA (Manpower Development and Training Act) and CAMPS (Cooperative Area Manpower Planning Systems) programs, and VEC's performance of certain services for DVR clients. Under the agreement relating to cross-referral of clients, VEC counselors can provide assistance in placement for DVR clients, and DVR can provide services for clients referred by VEC. Under the MDTA program, DVR counselors can refer clients to VEC for training under the Manpower Development and Training Programs. The CAMPS Program is a comprehensive inter-agency plan which could ultimately involve all State and Federal agencies involved in manpower and related programs. The agreement between VEC and DVR provides for inter-agency cooperation in any CAMPS programs involving the two agencies. In addition, the inter-agency agreement also provides that VEC will administer the General Aptitude Test Battery to DVR clients in order to determine vocational training and employment directions for them.

DVR and CVH also have an inter-agency cooperative agreement which specifies the responsibility of each agency for the rehabilitation of persons having different types of visual impairments. Under this arrangement, for example, legally blind persons who are referred to DVR are, in turn, referred to CVH. Visual eligibility is determined according to the following criteria: DVR refers to the Commission for the Visually Handicapped persons: (1) having 20/200 or less vision in the better eye with correcting glasses, or a field restriction to 20 degrees or less in the better eye; or (2) having between 20/100 and 20/200 vision in the better eye with correcting glasses, or a field limitation to thirty degrees or less in the better eye, if the person has been unable to adjust satisfactorily to his loss of vision and if it is felt that the person, at the time of referral, should have the specialized services available through the Commission; or (3) having night blindness or a rapidly progressive eye condition which, in the opinion of a qualified opthalmologist, will reduce his vision to 20/200 or less; or (4) for whom eye treatment and/or surgery are recommended regardless of visual acuity.

An agreement between DVR and the Virginia Department of Welfare and Institutions provides for cooperation between DVR and local welfare departments. In effect, this agreement specifies the division of responsibility between DVR and the local welfare departments in the rehabilitation of public welfare recipients. DVR agrees to provide certain rehabilitation services, ranging from medical evaluation through job placement and follow-up. The local departments of welfare agree to provide specific auxiliary services which are needed by the client but which are not necessary for vocational rehabilitation. These auxiliary services include continuing financial assistance and services to the client.

Finally, there is a cooperative agreement between the DVR and the Norfolk Area Medical Center Authority which operates the Tidewater Rehabilitation Institute. This covers certain assistance—including counseling, other professional, technical, and financial assistance for initial staff and equipment which DVR will provide for the Institute. The Institute agrees to provide certain staff, services, and physical facilities, as well as to give preference—in terms of acceptance for services—to clients referred by DVR and to accept certain fees for services.

Special Assignments of Counselors

While there are no formal agreements as such, DVR has provided counselors—on either a part-time or full-time basis—to certain institutions established by public agencies. The most frequent type of special assignment is to various types of hospitals. Thus, DVR counselors are specifically assigned to: (1) the University of Virginia Hospital; (2) the Medical College of Virginia Physical Medicine and Rehabilitation Unit; (3) Eastern State Hospital; (4) the Petersburg Training School; (5) the Lynchburg Training School; (6) the Blue Ridge Sanatorium; (7) the Catawba Sanatorium; (8) Southwestern State Hospital; (9) the McGuire Veteran's Administration Hospital; (10) the Veteran's Administration Hospital in Roanoke; and (12) the Virginia State School for the Deaf and Blind at Norfolk. In addition, there are DVR counselors assigned to the Social Security Offices in Alexandria, Norfolk and Rich-

Referrals

No formal agreements exist between DVR and a number of other public and private agencies, but a number of these agencies are important sources of referrals for DVR. Among the public agencies which are involved are hospitals, educational institutions, (with which there are no cooperative agreements), health agencies, and the Industrial Commission. A large number of referrals, however, also come from private individuals and groups. Nearly one-quarter of DVR's rehabilitated clients in fiscal year 1967, for example, were referred by private physicians. Substantial numbers of other clients were also referred by private physicians. Substantial numbers of other clients were also referred by private groups and individuals. Because of the manner in which referrals are reported, it is not possible to specify the exact number from these types of sources. (Under the codes used on the agency reporting form, R-300, these are listed under "individuals, other than the disabled client" and "other sources.")

Social Security Disability Beneficiary Program

Since July 12, 1966, DVR has participated in the Social Security Disability Program. This program was authorized by the 1965 Amendments to the Vocational Rehabilitation Act which provided for the rehabilitation of selected Social Security disability beneficiaries. All costs of this program, including administration, counseling and guidance costs, and case service expenditures, are reimbursed to DVR.

Commission for the Visually Handicapped Cooperative Agreements

Many of the services which are provided by DVR through cooperative agreements involving inter-agency related programs are also provided by the Vocational Rehabilitation Department of CVH in cooperation with other departments in the agency.

This Department has not established any facilities in cooperation with other institutions, such as schools, correctional institutions, and mental hospitals. Some of the services which DVR provides through its special units are, however, also provided by the Vocational Rehabilitation Department of CVH. Since CVH supervises educational services for the blind through its Educational Services Department and welfare assistance to the blind through Aid to the Blind, intra-agency referrals for vocational rehabilitation services are made, when appropriate, to the Vocational Rehabilitation Department of CVH.

Other intra-agency related programs include the Workshops for the Blind, the Business Enterprises Department, and the Home Study Department. The CVH Workshops, located in Charlottesville and Richmond, provide training and employment for blind adults referred by the Vocational Rehabilitation Department. The Business Enterprises Department operates the vending stand program through which vending stands are established for visually handicapped persons in public and private buildings. Under this program, rehabilitation clients can be trained and established in vending stand operations. The Home Teaching Department provides a number of services, including counseling and instruction, to pre-school children and adults. Where necessary, referrals can be made between the Home Studies Department and the Vocational Rehabilitation Department. In November, 1967, a revised agreement was established for two departments setting forth the procedures to be followed by rehabilitation counselors and rehabilitation teachers in implementing a coordinated service program for rehabilitation clients. In addition, the services of the Talking Book Machine and Library Services Department are available for rehabilitation clients.

The intra-agency programs, then, are a function of agency policy. And, as the intra-agency programs which have been described indicate, the Commission for the Visually Handicapped has developed policies and procedures applicable to all departments composing the Commission which are designed to enhance full utilization of total Commission services in serving clients.

There are formal agreements between CVH and the Virginia Employment Commission and DVR. The agreement with DVR, as discussed previously, sets forth the division of responsibility of both agencies for persons with visual handicaps. The agreement between CVH and VEC provides for reciprocal referrals, the exchange of information between the two agencies, and testing services for rehabilitation clients.

Special Assignments of Counselors. While there are no formal agreements as such, CVH provides counselors on a special assignment, part-time basis to: (1) Virginia School for the Deaf and Blind; (2) Virginia School at Hampton; (3) Virginia Workshop for the Blind at Charlottesville; (4) Medical College of Virginia; (5) University of Virginia. Blind and visually handicapped located in other private and public institutions—such as hospitals, schools, correctional institutions, mental hospitals—are served by rehabilitation counselors as part of their regular caseload.

Referrals

The Commission maintains a centralized system known as the Model Reporting Area System which identifies and maintains information on legally blind persons residing in the State. Information is collected from a number of sources. These include welfare departments; public schools; opthalmologists, optometrists, and opticians; local health departments; social security offices; employment offices; hospitals and clinics; and the Division of Motor Vehicles. Either through direct supervision of programs—such as Aid to the Blind, Education Services Department—or through personal contacts between counselors and the sources listed above, the names of blind and visually handicapped persons are obtained. In addition, persons receiving services or referred to any department within the Commission are made known to other departments within the agency in order to provide, where necessary, utilization of total Commission services.

The Vocational Rehabilitation Department of the Commission for the Visually Handicapped is, therefore, involved in a number of intra-agency programs which provide referrals, services, and information for rehabilitation clients. Related programs as they affect CVH are essentially the products of agency policy. Thus, the context within which related programs are analyzed differs for DVR and CVH.

Current Relationships

Social Security Trust Fund Disability Beneficiary Rehabilitation Program. Under the 1965 Amendments to the Social Security Act, Congress established a provision to permit rehabilitation of selected Social Security disability beneficiaries to be paid from the Social Security Trust Funds. The Virginia Department of Vocational Rehabilitation amended its State Plan July 12, 1966, in order to make use of these funds with the objective of making it possible for more disability beneficiaries to receive vocational rehabilitation services. All costs of this program, including administration, counseling and guidance costs, and case service expenditures, are reimbursed to DVR.

In September, 1966, a survey was made of Social Security disability beneficiaries throughout the State who were actively receiving some type of rehabilitation service through the Department of Vocational Rehabilitation. Approximately 55 clients who met Trust Fund eligibility requirements were found. As of February 29, 1968, 224 cases had been assigned to the Disability Beneficiary Rehabilitation Program. It is anticipated that the Disability Beneficiary Rehabilitation Program will continue to expand and the number of SSDB cases served through the program will increase.

Most states throughout the nation are taking advantage of this financial resource so that more SSDB cases can be served.

Objectives of the Trust Fund Program are as follows:

1. To restore disability beneficiaries to substantial employment.
2. To offset (or save) costs to the Trust Fund through:
    a. Benefits saved
    b. Additional tax contributions on earnings of rehabilitated workers.

Personnel have been increased as the need became evident. Initially, there were a program supervisor and a secretary who performed the administrative duties of the program. Cases were referred to local field counselors. Three special Trust Fund counselors and three secretaries have been employed since January 1, 1968. They have been placed in the metropolitan areas of Alexandria, Richmond, and Norfolk and will be assigned only SSDB clients. Plans are being made to add a special counselor and secretary to the Roanoke office shortly after July 1, 1968.

The great majority of referrals of disability beneficiaries are made from the Disability Determination Section in their Richmond Office. Here they are screened and those cases which seem to possess some potential for benefiting from DVR services are forwarded to the appropriate counselor. Some additional referrals are made by the many referral agencies which are visited by VR counselors.

It is probably too early to answer the question of how effective the Disability Beneficiary Rehabilitation Program is. Nevertheless, the program was initiated with approximately 55 cases and now there are 224 cases assigned to it. During fiscal year 1967, eighteen Trust Fund cases were rehabilitated. For fiscal year 1968, 56 Trust Fund cases were closed as rehabilitated. By adding special counselors in the metropolitan areas, the number of clients rehabilitated in the coming year should be increased significantly.

As was mentioned previously, when the program began, field counselors were serving the Trust Fund cases. It was assumed that the program could be greatly improved by having special counselors serve in some metropolitan areas, thus giving a concentration of effort to the group of referrals. It remains to be seen what effect special counselors will have on the overall program.

At the present time, long-range plans include the training and assignment of special counselors in any area of the State which has a sufficient number of SSDB cases to justify a Trust Fund counselor. Another part of the State which is being considered for assignment of a special counselor is the Shenandoah Valley area.

The growth in the Social Security Disability Beneficiary program during the past two years has been substantial. In fiscal year 1967, total expenditures under the program were $144,749. In fiscal year 1968, total expenditures are expected to total $200,300, and this will represent a 38.4 percent increase over 1967 expenditures. In terms of both rehabilitation and expenditures, therefore, it is expected that the SSDB program will continue to increase.

Recommendation (Immediate 9): Increase the special assignment of DVR counselors to Social Security disability beneficiary cases, extend it to areas of the State not presently covered, and continue its expansion of the SSDB program.

Office of Economic Opportunity. There are a number of programs administered by the Office of Economic Opportunity which could provide for DVR clients. It is possible, for example, to have DVR counselors refer clients for specific services under the following programs: Community Action Program; Job Corps; Neighborhood Youth Corps; Work Experience; Adult Basic Education; Upward Bound; Legal Services; Small Business Loans; and Health Services, among others. For the most part, referrals of this type would involve auxiliary services provided by one or more of the OEO programs.

In order to evaluate these programs, records of referrals from DVR to the OEO programs are needed, and these records are not kept. It is probable, however, that utilization of these programs is minimal at present, since many have been established only recently, and there has been no attempt by the agency to inform counselors of the programs and services which are available.

It is clear that nature and scope of the various OEO programs could provide significant assistance to vocational rehabilitation. In order for maximum assistance and cooperation to occur, however, it will be necessary for the agency to take steps to inform counselors about the available programs and how these programs might be best utilized. It would also be helpful if a system for recording referrals to OEO would be established, since this would provide some objective indices for evaluating the OEO related programs.

Recommendation (Immediate 27): Set up record keeping systems at the counselor level of DVR to provide information on referrals to related programs, the services provided to referrals by related programs, and the outcome of training provided to referrals by related programs.

Department of Public Welfare and Institutions. DVR's relationship with the Department of Public Welfare and Institutions consists of cooperative agreements involving: (1) facilities at correctional institutions for juvenile offenders and, (2) inter-agency referrals involving local public welfare departments. The three institutions at which facilities have been established are the Natural Bridge Forestry Camp, the Bon Air School for Girls, and the Beaumont School for Boys. An examination of each of these facilities is provided together with a general evaluation of the facilities program at the correctional institutions.

The agreement between DVR and the Department of Welfare and Institutions also provides for reciprocal services between DVR and local welfare departments. Case workers with the local welfare departments refer their clients to DVR for rehabilitation services, and the local welfare departments agree to provide specific auxiliary services. In general, then, the relationship here involves a referral system, and the scope and effect of the program are essentially determined by the number of clients referred to DVR and the status in which these clients are closed.

Bon Air School for Girls is a training school for delinquent girls between fourteen and eighteen years. Children are assigned to the institution following their commitment to the Board of Welfare and Institutions by the juvenile courts throughout the State. The purpose of the institution is to rehabilitate these children through the use of education, casework, psychology, psychiatry, medicine, vocational training, and religion. Girls are committed for an indeterminate period of time. Their average age is 15 years and 6 months and the average length of stay at the school is seven months.

The school was established in 1910 on a 407 acre tract of land near the community of Bon Air in Chesterfield County. About 75 acres comprise the campus with the remaining acreage being woodland.

The average daily population of the institution during fiscal year 1967 was 167. It is anticipated that the population will reach 200 by the beginning of the next biennium. Funds for an additional girls' cottage have been appropriated and progress toward completion is being made.

In February, 1965, the Department of Vocational Rehabilitation, through cooperation with the Virginia Department of Welfare and Institutions, established a Vocational Rehabilitation Unit. The aim is to offer vocational rehabilitation services concurrently with and subsequent to confinement of disabled delinquent adolescents at the school.

Personality disorders comprise the single largest disability group of clients at the school and accounts for 60 percent of the total. The bulk of the remaining 40 percent suffer from mental retardation. Clients of all disability categories will be served if referred but virtually all of the referrals fall into one or both of the above groups.

Services provided to clients include:

Physical and medical evaluation
Psychological services
Social services
Pre-vocational and vocational training
Vocational evaluation
Rehabilitation counseling
Personal adjustment training
Referral for treatment
Job conditioning
Job placement.

During fiscal year 1967, the rehabilitation unit provided services for 220 clients. Of this number, 50 were placed into competitive employment. The types of employment involved were many and varied but most placements were in the areas of personal services, clerical, secretarial, beautician, and nurse's aide. All of the clients served, 220, were referred by the Bon Air School for Girls.

The Vocational Rehabilitation Unit referred 40 clients to the State Mobile Psychiatric Clinic (Department of Welfare and Institutions) for auxiliary services. The services requested were additional psychological testing.

Average daily caseload for fiscal year 1967 was 80 clients. Daily caseload capacity for the rehabilitation unit is 120 clients. None were awaiting services at the time of survey.

The physical plant which is being utilized by the unit includes a vocational training area with 1,600 square feet of floor space with a capacity of fifty clients; and evaluation area with 120 square feet of floor space and capacity of ten clients; and a special education building comprising 2,000 square feet and a capacity of ninety clients.

There is a lack of space for evaluation purposes, but at the present time there are no plans for provision of this needed space.

The types of equipment being used in the rehabilitation unit are laundry, business machines, cosmetology, food service, and sewing. Current plans are underway to replace most of the equipment in the business and cosmetology areas. This replacement will not enable the unit to serve an additional number of clients but the quality of service will be improved.

Natural Bridge Forestry Camp is located in a mountainous section of Virginia about two miles from Natural Bridge Station. It is housed in frame buildings constructed in the 1930's for a Civilian Conservation Corps Camp. Following CCC days, it was occupied as a federal correctional institution for youthful offenders. After its closure as a federal camp, the State of Virginia secured the property under a "use permit" to serve as a youth correctional camp for boys. The Welfare and Institutions Department sent the first boys there in January, 1964.

Sponsored by joint cooperation of the Virginia Department of Vocational Rehabilitation and the Virginia Department of Welfare and Institutions, a Vocational Rehabilitation Unit was launched in late summer of 1966. A relatively small number of delinquent youth have physical disabilities. A greater number have mental disabilities, mostly in the form of mild retardation. By and large, however, a still greater number of confined youth function with certain behavioral and personality disorders. Also, there are additional combinations of the above conditions.

Of the clients served at Natural Bridge Forestry Camp by DVR, 75 percent suffer primarily from personality disorders and 25 percent from mental retardation. A full 85 percent of all served here possess psychosocial disorders which constitute either a primary or secondary disability.

A full range of services are provided, including the following:

Physical and medical evaluation
Medical management
Medical consultation
Psychological services
Social services
Pre-vocational and vocational training
Vocational evaluation
Rehabilitation counseling
Personal adjustment training
Transitional employment
Job placement

As in all correctional institutions, the largest disability group of clients are those who suffer from personality disorders. Roughly 80 percent fall into this category. The remaining 20 percent are mentally retarded. Clients with any type of disability will be served if referred.

During fiscal year 1967, 535 clients were served by the Unit. Of these clients, ninety-eight were placed into competitive employment. Although the types of employment were many and varied, most of them were in the areas of personal services, construction, barbering, auto mechanics, service station attendants, and building and grounds maintenance. It goes without saying that all of the clients who were recipients of VR services were referred by the institution.

During this same period, the VR unit referred sixty-seven clients to other agencies for auxiliary services. These referrals were made as follows:

Virginia Employment Commission	42 clients
Virginia Department of Public Welfare	19 clients
Mental Health Clinics	6 clients

The average daily caseload for the Unit was 200. The daily caseload capacity is 380 clients. At the time of survey, none were awaiting services.

The only physical plant area set aside specifically for VR purposes is office space for counselors and secretaries. However, all of the institutional facilities are available to the VR Unit. Psychological evaluation has a capacity of five clients; capacity for counseling purposes is 200; and vocational training areas can accommodate 110 clients at a given time.

There is a definite lack of space for evaluation purposes, and the need for such space has been felt acutely. This is now being remedied. Cooperation between the two State agencies and use of matching state-federal funds will result in construction of a $74,074 addition to and remodeling of the vocational training building. In addition, the vocational instruction staff will be increased. It is anticipated that this expansion and improvement will enable the VR Unit to serve about 100 additional clients.

The types of major equipment being used in the Unit are woodworking, auto mechanics, barbering, food service, and brick masonry. Additional equipment will be acquired after construction and remodeling of the physical plant are completed.

At the correctional institutions, then, DVR has established programs for all clients accepted for vocational rehabilitation services involving comprehensive vocational evaluation within the institution, and, upon their discharge from the institution, those vocational rehabilitation services needed to enhance their adjustment into employment.

The correctional units employ approximately thirty-one full-time professional staff members. During fiscal year 1967, a total of 858 clients were served by the units, which meant that this number of clients was reached before discharge from the institutions and that services were begun at a time when they might be most effective. Prior to the establishment of these units, this specific client population would not have been referred to DVR until discharge, if there were any referral at all.

During fiscal year 1967, 103 clients were served by this Unit. The geographical area from which these clients were drawn include the entire State. All of them were under twenty-one years of age. Because of the nature of the rehabilitation unit, all of the clients were referred by the Natural Bridge Forestry Camp.

The average daily caseload of the Unit is ninety clients. This figure is also the rated capacity of the institution. There are none awaiting services, for services begin immediately upon referral.

Vocational training includes auto mechanics, woodworking, maintenance, food service, and vocational forestry. Each of the training areas will accommodate twelve students. At the present time there are no deficiencies in the physical plant which houses these areas and no improvement projects are being planned.

The types of equipment being used in the rehabilitation unit are primarily mechanical tools and woodworking equipment. These are felt to be adequate and there are no plans for acquisition of new or additional equipment.

The Beaumont School for Boys was established in 1898 and is located on a 2,400 acre tract of land in Powhatan County, Virginia, twenty-six miles west of Richmond. Approximately half of the acreage is in either cultivation or pasture and the remainder in woodland. The buildings and grounds of the campus area comprise about forty acres.

The function of the School is to provide a program of treatment and rehabilitation for delinquent children placed at the institution by the State Department of Welfare and Institutions. The School provides a group living experience for youngsters with overt behavior problems which indicate the need for a controlled environment. By using individual casework and other specialized services, the youngsters may become able to face responsibility for their own actions and assume normal social relationships; and many of them return to their respective communities to become productive citizens.

The institution has a capacity of approximately 500 boys. The flow of population at the School is regulated by rate of commitment and discharge so that close to 900 youths are served annually by the School. The entire student population ranges between fifteen and eighteen years of age. At the present time the average length of stay for a boy assigned to the training school is seven to eight months.

In March, 1965, the Department of Vocational Rehabilitation and the Virginia Department of Welfare and Institutions established a cooperative Vocational Rehabilitation Unit. The objective of this joint effort is to assist students of the institution to reach a level of vocational adjustment that they, insofar as possible, may achieve an independent self-supporting status. A formal cooperative agreement requires each agency to examine its own unique capacity for providing services which enable delinquent boys to grasp an opportunity for improving their troubled plight. Currently neither agency alone commands sufficient resources to accomplish this tremendous task of integrating the delinquent youth with normal society.

Through the pooling of resources, however, and by blending efforts of each agency, the resulting dual contribution greatly enhances the effectiveness of services to the delinquent youth.

The actual effects of this related program are difficult to judge, since the units have been in operation for a relatively short time. Nevertheless, through this related program, an important recipient population is being served at a time when vocational rehabilitation services can be most effective. And through the process whereby discharged clients continue to receive necessary vocational rehabilitation services, a significant program has been developed.

In fiscal year 1968, 26,416 adults received assistance under the Aid to the Permanently and Totally Disabled and the Aid to Dependent Children programs in Virginia. Of this total, 9,200 were covered under APTD and 17,216 under ADC. The number of referrals from local welfare departments to DVR, however, was only 3,170 for all cases on hand as of July 1, 1967 and new cases coming to DVR during fiscal year 1968 (a total of 32,878 cases). This represented 9.6 percent of all DVR referrals. Given the number of adults under the APTD and ADC programs, however, only about one out of every fifteen adults covered are referred to DVR during a given fiscal year.

Recommendation (Soon 13): Establish the position of "Director of DVR and Department of Public Welfare Coordinated Services" within the Department of Vocational Rehabilitation.

Recommendation (Soon 4): Assign special counselors to local welfare departments in heavily populated areas, such as Richmond, Norfolk, and Alexandria.

Department of Health. DVR and the Virginia Department of Health have entered into an agreement for the purpose of providing comprehensive vocational rehabilitation services to patients in State tuberculosis hospitals who are eligible for such services. The provision of services would be achieved through the establishment of rehabilitation facilities at the hospitals. Thus far, however, the facilities have not been established. At the present time, the only provision for direct services is through the special assignment of rehabilitation counselors, on a part-time basis, to the Catawba and Blue Ridge Hospitals.

The Department of Health is responsible for administering the Counseling and Referral Program for Armed Forces Medical Rejectees. The relationship of DVR with this program is discussed under the Military Rejectee Program. In addition, other referrals are made to DVR from Health Departments. Of all cases on hand as of July 1, 1967, and all new cases coming into DVR during fiscal year 1968 (32,878 cases), a total of 1,279 referrals were made by State and local health departments. This represented only 3.9 percent of total referrals to DVR during this period.

To qualify for military service, an enlistment applicant or potential draftee must satisfy certain minimum medical, mental, and moral standards.

The mental standard is based on the scores received from the Armed Forces Qualification Test. The object of this test is to measure an individual's ability to absorb military training within a reasonable length of time. It also provides a measure of his general usefulness. The test is not an "intelligence test." It does not measure educational achievement as such, although both intelligence and education affect the score. It is specifically designed to predict success in military service.

The qualities needed to be a successful soldier, sailor, or airman in our modern forces are much the same as the qualities needed in a broad range of civilian jobs. It is, therefore, the nature of the Armed Forces Qualification Test which makes failure to pass it a matter of concern to the community at large. The majority of those who fail these tests can reasonably be expected to lack many of the qualities needed to lead productive lives as civilians.

The medical examination is designed generally to select men who are fit for the demands of military service. The examination also is designed to identify those with medical conditions or defects which might be detrimental to the health of other individuals, cause excessive loss of time from duty, unusual restrictions on location of assignment, or become aggravated through performance of military duty.

A manpower conservation program to meet the needs of young men who fail to pass the physical or educational tests given to Selective Service registrants was initiated in February, 1964. The Secretary of Labor, through the resources of the Employment Service, was made responsible for a program to help those failing to meet the educational achievement standards of the Armed Forces. Military medical rejectees were included under a program administered by the Department of Health, Education, and Welfare.

The President's Task Force on Manpower Conservation reported in 1964 that 75 percent of all persons rejected for failure to meet the medical and physical standards would probably benefit from treatment. Some of these conditions can be entirely corrected by proper medical treatment, such as tuberculosis and hernia. A greater number of medical rejectees have a condition which requires, or at least would benefit from, medical treatment. This group includes such conditions as asthma, emphysema, cardiac disease, and epilepsy. A still greater number need both medical and other health services. Amputees and the partially deaf fall within this group. An equally large group consists of those medical rejectees for whom regular medical services are not the answer. It includes the blind, those who are too tall or short to meet the standards of the Armed Forces. It includes those for whom medical treatment will not result in any significant improvement.

It is apparent that many medical rejectees who fall into any one of the above groups might profit from vocational rehabilitation services if they can be identified and the services offered to them.

Medical defects account for approximately 30 percent of the rejection rate for military draftees. Primary causes are diseases and defects of the bones and organs of movement, circulatory system diseases, overweight, and psychiatric disorders.

Congress has authorized a program to provide referral and counseling services to persons rejected by the Armed Forces for medical reasons. Known as the Counseling and Referral Program for Armed Forces Medical Rejectees, it is administered by the State Health Department.

The program operates from two Armed Forces Examining Stations located in Richmond and Roanoke. Two Health Department counselors and one secretary are stationed in Roanoke and one counselor and secretary in Richmond. One State supervisor and secretary are located in the Health Department Building.

Most medical rejectees are interviewed at the examining station and encouraged to seek or continue remedial treatment. Information obtained from the interview is forwarded to the local health department in the rejectee's home area. Follow-up activity is assigned to local health department personnel.

The objectives of the program are:

A. To operate a system of screening and evaluation of Armed Forces Examining Station medical records of men rejected for military service for medical reasons.

B. To counsel these young men concerning health service needs as indicated by their medical records.

C. To provide for their referral to health and rehabilitation resources for appropriate services.

D. To provide for necessary follow-up of each case.

About 85 percent of medical rejectees are interviewed. The remaining 15 percent either depart on an early bus shortly after completing examination, do not follow the usual pattern of movement of examinees, or otherwise manage to miss the interviewers. An estimated breakdown of disposition of those interviewed is as follows:

A. Twenty-five percent will not require referral to a source for medical care.

B. Eighteen percent will already be under private care.

C. Nineteen percent will not respond to the program.

D. Thirty-eight percent will receive further counseling, referral, and follow-up.

Approximately 45 percent of the rejectees have their records forwarded to local health departments. Others may have known about their conditions prior to their examinations and have been under treatment. Still others are classified as "excludable"—either too tall or too short, amputees, homosexuals, or some other defect.

Causes for medical rejection are many; but some of the most common ones are nutritional defects, primarily overweight, gastrointestinal defects, such as hernias, eye disorders, bone and related defects, circulatory problems, and ear disorders.

During 1967, 4,033 persons were rejected by Armed Forces Examining Stations for medical reasons. Of this number, 2,123 (or 52.6 percent of the total) were closed out as not needing Health Department services, not accepting services, or for other reasons. The total number forwarded to Local Health Departments was 1,910 of which follow-ups were completed for 1,596.

Of the total number for whom follow-ups were completed, 39.0 percent did not receive any care. Of those who did receive care (844 or 44.9 percent of total for whom follow-ups were completed), only sixty-six received care from a public agency (presumably a local health department). Finally, of the total number who received care, eighty-two persons (9.7 percent of the total) were classified as cured, 306 persons (36.3 percent of the total) were classified as improved, and the remainder were classified as unchanged or not evaluated.

It is apparent that large numbers of military mental rejectees who might be able to use rehabilitation services are not referred to DVR directly through a military rejectee program. Thus, for example, of the 2,123 cases closed at AFE Stations, there could have been and probably were a significant number who were eligible for and who needed rehabilitation services. Similarly, for those cases which did not receive care, some number could again have needed and been eligible for rehabilitation services. And, finally, there is no way to determine the number of persons for whom follow-ups were not completed who could have used rehabilitation services.

Military mental rejectees are referred by AFES to VEC. VEC counselors are assigned to AFE Stations in order to provide initial counseling for those who fail to satisfy the mental standards. In the first three months of fiscal year 1968, 701 persons were rejected for mental reasons. Of this number, 406 were given initial counseling at the AFE Stations. Of these, 192 cases received initial interviews at local VEC offices. Thus, of the total number rejected over a three-month period, only 27.4 percent made it to local VEC offices.

Only a fraction of military mental rejectees get to the initial interview stage. Further, since only four recorded referrals were made to DVR during this period, it is clear that direct referral of military mental rejectees is minimal. As was the case for military medical rejectees, there is no accurate estimate of the number of military mental rejectees who need rehabilitation services, but it is virtually self-evident that this is a population group which has a disproportionately high need for rehabilitation services. Yet the manner in which virtually all of these rejectees get referred to DVR is through an indirect referral process.

During the first eleven months of fiscal year 1968, DVR counselors rehabilitated 365 military rejectees. Fifty cases were closed as not rehabilitated after services were provided. An additional 468 were closed without receiving services. The source of referral for this group is not known. The coding which indicates a referral's military status is not related to the coding which indicates the source of referral.

It is important to note that military rejectees constituted 5.7 percent of the total closures in DVR during this period and also represented 5.8 percent of the closed rehabilitated total. Moreover, the rate of closed rehabilitated cases to total closures for military rejectees was 42.1 percent, which was slightly higher than the rate for all DVR cases of 41.4 percent. Thus, successful rehabilitations among military rejectees were comparable to successful rehabilitations among the DVR's total population.

From the data supplied on military rejectees, it appears that approximately 7,000 persons are rejected for medical or mental reasons over a given twelve-month period. If the figures reported by DVR are projected over a twelve-month period, approximately 13 percent of all rejectees are closed in any status during a twelve-month period. And this, of course, means that DVR is coming into contact with only a small percentage of all rejectees.

There would perhaps be great merit in having one or more rehabilitation counselors working as a part of the project staff to assist in carrying out the functions of screening, counseling, and following up those rejectees having sufficient disability to merit consideration for rehabilitation services.

Recommendation (Interim 31): Involve DVR, VEC, and the Department of Health in a study of the current military rejectee referral process as it relates to vocational rehabilitation.

Virginia Employment Commission. VEC administers the MDTA Programs, and it also has a formal agreement with DVR providing for reciprocal referral services. Finally, DVR and VEC have entered into an agreement relating to the CAMPS program.

This plan covers all areas of Virginia and not, as is often assumed, merely the major cities. A cursory analysis reveals that the emphasis is placed upon the rural areas and, more specifically, the Appalachian Redevelopment Areas of Southwest Virginia. More than 65 percent of all MDTA institutional programs are operating in the western half of the State.

Hard-core individuals are given every consideration in planning related programs. This is evidenced by the rather large number of basic education classes provided for these persons in an effort to bring them up to a trainable level. Trainees are accepted in a large number of projects at their educational achievement level, whatever this level might be.

Virginia is operating four Manpower training centers which encompasses 50 percent of all institutional trainees. In addition, there is one modified training center in the Norfolk metropolitan area. Of the four Manpower training centers mentioned above, one is located in a depressed rural area and serves twenty counties; one is operated in an industrialized area of the Appalachian; and two are located in a semi-rural area of the deep Appalachian, adjacent to West Virginia, eastern Kentucky, and Tennessee.

Manpower institutional classes are providing training for persons referred by DVR in all cases in which the trainees have physical and mental capabilities for profiting by the training. Parolees from the Department of Penal Institutions, juvenile delinquent institutions, and wards of the juvenile courts are being enrolled in MDTA institutional training programs when referred by responsible officials. All Neighborhood Youth Corps referrals are accepted on the same basis as other referrals.

Instructors are not in plentiful supply, as everyone in the training business is in the market for more teachers. The MDTA institutional training plan may be one way of meeting the need.

With the awareness of the shortage of teachers, a plan which involves the relaxation of educational requirements for occupational instructors, providing that they are occupationally competent, has been set up. Instructors with two or more years of occupational experience beyond the apprentice level in the occupation which they are to teach can be given a special teaching license, provided that they are high school graduates, or the equivalent, and have a desire to teach. The assistance of business and industry is solicited in locating instructors.

At the present time, MDTA programs are using facilities for sixty projects and more facilities are available. Some projects are operating in leased buildings but new vocational buildings are under construction. There are more facilities available in areas where the need is less, and fewer facilities available where the need is greater. Generally, however, the availability of facilities is no immediate problem. Lack of funds is the paramount consideration.

During fiscal year 1967, fifty-two Manpower training programs were planned, budgeted, and approved for training 1,852 individuals in Virginia. Training in twenty-five occupational areas was provided, and programs were operated in twenty-two school divisions. Length of the programs varied from eight to 104 weeks, depending upon the occupational area.

Programs starting during fiscal year 1967 and those continuing from fiscal year 1966 total 111 with an enrollment of 2,866. During fiscal year 1967, 1,359 trainees graduated from MDTA programs.

Although business and industry have stated some minimum educational requirements for employment, no one is denied training in some occupational program due to his educational level. All trainees are given an educational achievement level test during the first day orientation period. This is not to deny anyone the opportunity to learn an occupation but is used as an aid to the instructor, so that he will better understand the trainee and be better able to plan for working with the trainee on an individual basis. All trainees indicating an educational achievement level below that needed to learn a specific occupation will be provided the necessary job-oriented basic and remedial education needed to bring them up to a trainable level. This level must necessarily be premised upon the judgment of the instructor and counselor as well as past experience in training adults for specific occupations.

Despite the obvious relevance of the MDTA Program to vocational rehabilitation, actual use of the program by DVR clients has been minimal. The number of DVR clients enrolled in MDTA programs in fiscal year 1967 was sixty with a total enrollment in MDTA programs of 1,852. Thus, DVR clients accounted for only 3.2 percent of MDTA trainees. Through the first eleven months of fiscal year 1968, seventy-two DVR clients were enrolled in MDTA programs out of a total projected enrollment of 1,511, and this represented 4.8 percent of total enrollment.

What is particularly striking is the differential use of MDTA programs by rehabilitation counselors. As noted above, sixty DVR clients were enrolled in MDTA programs in fiscal year 1967, and seventy-two clients were enrolled in fiscal year 1968. Three counselors, however, accounted for almost one-fourth of these enrollees. During both years, three-fourths or more of all DVR counselors had no enrollees in MDTA programs, and only 2 percent had as many as five enrollees. And, as the percentage of counselors having had clients rejected indicates, the lack of use is not a function of disproportionate rejections of DVR clients.

What has occurred, then, is that a few counselors make substantial use of MDTA programs, while the overwhelming majority do not use the program at all. This occurs despite the fact that the types of job training provided under MDTA programs are similar to those provided by DVR. And since VEC, which administers the program, surveys job needs in a given geographical area before establishing particular training programs, job training under the MDTA programs would appear to be particularly beneficial for DVR clients. It is important to note that differential use does not occur solely on an area basis. Rather, it is related to individual counselors. Thus, in one area office, one counselor had fifteen enrollees in MDTA programs while another counselor had none. In another office, one counselor had five enrollees, one counselor had one enrollee, and ten counselors had none. And while the number of counselors making substantial use of MDTA programs is too small for accurate inference, it appears that those who use the programs most are those who are most involved in other related programs. It is clear that MDTA programs can be used by DVR clients, but the minimal use probably indicates that the great majority of counselors know very little about the programs.

Moreover, the potential savings to DVR through increased use of MDTA programs are substantial. Costs for training and training materials and for maintenance and transportation averaged $157 per DVR client in fiscal year 1967. Since MDTA programs absorb these costs, an average of only two enrollees per counselor would result in savings of over $130,000 in a twelve-month period. And since the funds would be available for services to other clients, increased program expansion would be possible.

The problems associated with the MDTA programs are characteristic of other related programs, such as those under OEO and the local welfare departments. In order for these programs to be effective, an agency program of information direction, and coordination is necessary if rehabilitation counselors are to use them.

Recommendation (Immediate 3): Instruct DVR counselors to use, to the maximum extent feasible, the client training and related services of other agencies. These include the Manpower Development and Training Act Programs, and the various Office of Economic Opportunity Programs, particularly the Job Corps, Neighborhood Youth Corps, and Work Experience Programs.

The agreement between DVR and VEC also provides for reciprocal referrals and services between the two agencies. Thus, VEC clients can be referred to DVR for rehabilitation services, and DVR clients can be referred to VEC for testing services and placement.

As compared to total referrals received by DVR, referrals from VEC to DVR are minimal. Of cases open as of July 1, 1967, and new cases referred to DVR through April 30, 1968, 725 referrals were from VEC. This represented 2.4 percent of total referrals. According to employment counselors, a somewhat larger number of VEC clients could use rehabilitation services than these actual referrals indicate. Sixty-six percent of the employment counselors referred less than 3 percent of their clients to DVR. Sixty-seven percent of the employment counselors, however, estimated that between 4 and 24 percent of their clients could use rehabilitation services, and 14 percent estimated that over 25 percent of their clients could use such services. It is apparent, then, that VEC counselors come into contact with a substantial number of clients who need rehabilitation services but do not refer many of these clients to DVR.

As noted above, rehabilitation counselors can refer clients to VEC for placement. According to VEC counselors, however, the number of clients referred to VEC and the optimum number of referrals which VEC counselors could handle are similar. Employment counselor estimates of optimum referrals are somewhat higher than actual referrals, but the differences here are small.

According to counselors in both agencies, the major barrier to a closer working relationship between VEC and DVR is that the counselors are unaware of how they could really help each other. The second most important factor was the belief that VEC counselors would need special training in order to work with rehabilitation clients. The physical separation between the two agencies, the number of employment counselors available, and the reluctance of rehabilitation counselors to have outside persons handle their clients were viewed as less important problems.

As far as the majority of employment counselors are concerned, it would not be a good idea to have most of the placement for DVR clients performed by VEC. Only 2 percent of the VEC counselors considered this to be a very good idea.

An assessment of the interagency relationship regarding reciprocal referrals and services, then, points up several problems. First, a larger number of VEC clients need rehabilitation services than are actually being referred to DVR. Second, referrals from DVR to VEC for placement are only slightly below employment counselor estimates of the optimum number of DVR referrals which they could handle. Third, employment counselors consider it a relatively poor idea to have VEC assume a major portion of the placement functions currently performed by DVR for rehabilitation clients. Fourth, counselors in both agencies consider the major problem in achieving a more effective working relationship to be a lack of understanding on their part of the manner in which they could help each other.

This last point is particularly important. The agencies appear to be differentially effective with respect to the placement of handicapped persons with given types of disabilities and also in placing handicapped persons in white-collar and blue-collar positions. This might indicate that interagency cooperation in the use of contacts and placement methods and operations could be extremely effective in maximizing the meaningful placement of handicapped persons. If this is to occur, however, counselors in both agencies must be made aware of the manner in which they can best cooperate and coordinate their efforts.

In its present form, the agreement between DVR and VEC provides that the two agencies will cooperate in any CAMPS program involving the two agencies. This envisions the types of cooperation and coordination noted above, and, when fully implemented, the system should be highly effective for coordinating related programs. Indeed, CAMPS is applicable to almost all of the related programs discussed in this report. It is clear that one of the major problems affecting related programs is lack of information on the part of field personnel. If the CAMPS program is implemented over the range of agencies with which DVR is currently involved or could be involved in terms of related programs, it could provide the necessary coordination, cooperation, and reporting which are obviously lacking at the present time.

Recommendation (Immediate 17): Maximize cooperation in the use of placement contacts, methods, and operations between DVR and VEC.

Local School Systems. Through cooperative agreements between DVR and local school systems, five rehabilitation facilities are currently operating and two additional facilities have been established and are expected to be in full operation by September, 1968.

This collaboration between public education and the Department of Vocational Rehabilitation may be the most promising effort on behalf of handicapped youth. Local and State resources alone have not generally produced a pattern of services which permits a handicapped youngster to make a smooth transition from school to gainful employment. The problems incident to rehabilitating young handicapped people can be diminished greatly if these problems are anticipated and identified while they are in a school environment.

Cooperative education-vocational rehabilitation programs for handicapped youth have been established in the following public school systems:

Fairfax County
Alexandria
Richmond
Albemarle County
Harrisonburg-Rockingham County
Roanoke County
Chesapeake

These cooperative agreements require each agency to examine its own unique capacity for providing services which will enable handicapped youth within the school systems to grasp a better opportunity for achieving eventual, suitable vocational adjustment. It is extremely difficult for either agency functioning alone to provide adequate resources to accomplish the tremendous task of integrating handicapped youth into normal society. By combining the resources and coordinating the efforts of each agency, services to disabled school youth will become much more effective.

Three basic criteria are involved regarding participation in the educational-vocational rehabilitation program. These are:

1. A disability must exist. This disability must be in the form of either a physical, mental, or emotional impairment with resulting limitations.

2. The limitations caused by the disability must impose a vocational handicap.

3. A reasonable expectancy must exist that as a result of VR services the youth will be able to enter gainful employment.

The disability groups served usually involve students who can be classified in the seven basic student types which are:

1. Mentally deficient. Mentally deficient refers generally to those students having an IQ of eighty or below.

2. Functional retardate. Functional retardation refers to those students who are performing well below their capabilities.

3. Behavioral problems. Behavioral problems refer to student behavior which seriously interferes with other people or that interferes with the full development of the youth himself.

4. Emotional disorders. Emotional disorders are concerned primarily with severe "anxiety" which may be directly felt or expressed or which may be unconsciously and automatically controlled by the utilization of psychological defense mechanisms, such as depression, conversion, displacement, etc.

5. Slow learners or underachievers. This term refers to those students who would usually be in the eighty-ninety IQ range.

6. Dropouts. This refers to students who terminate their school experience but who otherwise would be qualified under the basic criteria previously explained regarding eligibility.

7. Physically disabled.

The range of services which can be provided by vocational rehabilitation in the public school units to eligible individuals consists of the following elements:

1. Diagnostic and related services
2. Counseling
3. Training
4. Books and training materials, including tools for training
5. Physical restoration services
6. Maintenance
7. Transportation
8. Business and occupational licenses
9. Tools, equipment, and initial stock
10. Job placement and follow-up services
11. Other goods and services necessary to determine rehabilitation potential or to render an individual fit to engage in a gainful occupation.

Following is information relating to each of the five cooperative units which are now in operation. These reports are based upon fiscal year 1967.

The Fairfax Vocational Rehabilitation Unit, the first school unit to be established (September, 1965), served 750 clients during the past fiscal year. Fifteen clients were placed into employment. The Unit had an average daily caseload of 580, with a daily caseload capacity of 600. No one was awaiting services at the time of survey. Rehabilitation services are performed within various areas of the County's thirty-seven schools.

Current improvement projects involve renovating and equipping classrooms in two of the high schools for evaluation and training of eligible girls. These projects do not propose to provide services for more clients but rather will improve the quality of services now being offered. A long-range improvement project plans similar improvement for a third high school.

The Alexandria Vocational Rehabilitation Unit served a total of 225 clients during the past year. Seventeen clients were placed into employment. The school system made 200 referrals, and twenty-five were made by the Alexandria Juvenile Courts. The average daily caseload was 248, while the daily caseload capacity is 300. Rehabilitation activities are being carried out in all of the Alexandria schools.

There is a definite lack of adequate facilities for purposes of vocational evaluation. This deficiency is now being corrected by improving the evaluation facilities. When completed, it is anticipated that the Unit will have its caseload capacity increased to 400; and the quality of services will be enhanced.

The Richmond Vocational Rehabilitation Unit served 1,093 clients last year. Of this number, 104 were placed into employment. All of the referrals came from the school system; these numbered 1,150. The Unit referred 100 clients to agencies such as Richmond Goodwill Industries, Virginia Employment Commission, Neighborhood Youth Corps, Job Corps, and Community Action Program. The average daily caseload was reported to be 500; the same figure as the rated daily caseload capacity. Thirty clients were awaiting services at the time of survey.

No deficiencies were noted in either the physical plants or equipment. No improvement projects are currently underway. Long-range plans include setting aside two entire schools for vocational rehabilitation activities. After completion of these projects, the Unit's daily caseload capacity will be increased to approximately 900.

The Harrisonburg-Rockingham Vocational Rehabilitation Unit during the last fiscal year, served a total of 121 clients. Three clients were placed into employment. As in the case of all the school units, the number of clients placed in employment is very small when compared with the number served. This is because these units are relatively new and services have not been completed for the vast majority of clients.

Most of the referrals have come from the school system. A breakdown of the referrals by source is as follows:

Schools	100
Health Department	3
Dept. of Public Welfare	5
Self-referred	6
Juvenile Court	3

The average daily caseload is reported as 170 and daily caseload capacity 175. At the time of survey, 100 individuals were awaiting services.

The Unit reports that facilities for evaluation purposes are inadequate. However, a vocational evaluation area is being installed in one of the County high schools; and long-range improvement plans include the development of similar areas in two more of the schools. These projects will increase the daily caseload capacity to 225.

The Albemarle County Vocational Rehabilitation Unit began operation in October, 1967, and therefore could not be inventoried as were the other school units. It did, however, receive 350 referrals during the first three months of its existence. The Unit will have an evaluation and work conditioning area consisting of 12,000 square feet with a capacity of ninety clients per day. The related instruction area will accommodate forty-five per day, and the domestic arts room can handle ten clients.

The importance of the school units within the rehabilitation program, then, is clear. During fiscal year 1967, four school units (Alexandria, Fairfax, Richmond, Harrisonburg-Rockingham) accounted for more than one-third of all clients served by rehabilitation facilities in Virginia. Given the effectiveness of rehabilitation within the school environment, the significance of this related program is apparent. Nevertheless, there are only seven of these units in the State, two of which have been established in the past several months. In order for this program to achieve its potential, school systems throughout the State should establish similar programs on either an individual or cooperative basis.

Recommendation (Interim 27): Where possible, develop additional school units (rehabilitation facilities) in cooperation with local school systems. Where feasible, encourage local school divisions to develop plans for facilities involving two or more school divisions on a regional basis.

Recommendation (Soon 12): Utilize the position of "Director of Cooperative School Programs."

DVR's involvement in related programs is varied, ranging from the cooperative agreements involving facilities to the reciprocal referral and service arrangements. As might be expected, the unit operations are particularly important. These account for approximately one-third of the referrals received by DVR. Moreover, approximately 60 percent of the clients who receive rehabilitation facility services in Virginia are served by the school, mental, and correctional units. Despite the fact that local schools account for DVR's largest referral source, only seven school units have been established. Thus, an extremely important recipient population could be assured of direct rehabilitation services through an expansion of the school unit program throughout the State. While it may not be feasible for each individual school system to have a unit established, cooperative agreements between two or more local systems could provide a practical basis for Statewide expansion.

As far as other related programs are concerned, full effectiveness has generally not been achieved. In the case of various OEO programs, it is clear that only minimal use occurs among DVR clients. And it is highly probable that the level of use is related to the lack of program information among rehabilitation counselors. Since many of the OEO programs could provide essential services to DVR clients, client services could be expanded by increased use. If this is to occur, however, rehabilitation counselors will need to be informed about the services available and the procedures needed to obtain services. Further, records of referrals and client outcomes should be kept by the counselors in order to provide a basis for an accurate assessment of the individual OEO programs.

The military rejectee programs should be a major source of DVR referrals. However, only about 13 percent of all rejectees are closed by DVR in any status during a given twelve-month period. Thus, approximately 6,000 rejectees are never seen by the agency. Since successful rehabilitations among military rejectees are proportionately higher than is the case for DVR's total caseload, a more effective referral system is needed.

The use of MDTA programs for rehabilitation clients is extremely low. During fiscal year 1967, DVR clients accounted for only 3.2 percent of MDTA program trainees. Given the differential use by counselors, it is probable that the level of use is related to counselor information about the MDTA programs. Since the services provided under MDTA programs are similar to a number of DVR's vocational training programs, expanded use of this program could also allow a parallel expansion in DVR services to other clients. If this is to occur, however, coordination, information, and record-keeping systems will have to be established in the same manner indicated for OEO programs.

A lack of information is also an apparent handicap to better cooperation between VEC and DVR. A greater number of VEC clients need rehabilitation services than are presently being referred to DVR. According to VEC counselors, referrals for placement from DVR are near optimum levels. One problem area, however, concerns placement contacts and techniques. Rehabilitation counselors and employment counselors appear to be differentially effective in placing persons with particular types of disabilities and also in placing disabled persons in blue-collar and white-collar positions. Inter-agency cooperation in the use of placement contacts and placement methods and operations might be extremely effective in maximizing the meaningful placement of handicapped persons.

Finally, referrals from public health departments and local welfare departments are relatively low. Since both these agencies serve population groups who have disproportionate need for rehabilitation services, some better method of securing referrals from both agencies is needed. Part-time special assignments of counselors to the local agencies might be an effective means for securing these referrals.

Throughout, it is clear that DVR could be more effective if greater use were made of the services of other agencies and if related agencies would refer more clients to DVR. One of the essential problems appears to be lack of information on the part of DVR counselors about services which are available from other agencies, and a corollary lack of understanding on the part of other agencies of the types of services which DVR can provide. Increased information, coordination, and accurate recording systems are needed if related programs are to become more effective. The CAMPS program could satisfy a substantial amount of these requirements, but if it is to be effected, program coordination within DVR's central office is going to be necessary.

The vocational rehabilitation program could provide more services to a much larger clientele if related programs are brought into expanded use. If this is to occur, however, greater efforts will have to made by DVR and by the related agencies.

Recommendation (Immediate 20): Establish joint In-Service Training Programs for DVR Counselors and related agencies' personnel—including Welfare Personnel, Public Health Nurses, Employment Counselors, and others.

Recommendation (Soon 11): Create post of "Director of Related Programs" (Related Programs and Employment of the Handicapped).

Employment of the Handicapped

If the vocational rehabilitation program is to provide maximum benefits both to the rehabilitated individual and the society, it is necessary that rehabilitated individuals be placed in meaningful jobs. It is at the job placement stage, moreover, that attitudes toward the handicapped assume critical importance. It is relatively easy for the general public and for employers to support vocational rehabilitation as an abstraction. It is less easy for persons to work alongside handicapped individuals or for employers to hire them.

Given the importance of proper placement, a number of studies have been undertaken to examine the bases of public and employer resistance toward hiring the handicapped.[1] While the nature of many of these studies has varied, there are a number of situational, attitudinal, and informational variables which have been identified as affecting the placement of handicapped individuals.[2] Among the situational variables are those relating to the types and sizes of businesses or industries in a given area. The potential for placement of the handicapped is higher in some types of businesses than in others and is also dependent upon the size of the business involved.[3] As might be expected, situational variables are not amenable to rapid change but rather provide the economic context in which the vocational rehabilitation program must operate. Attitudinal variables include, among others, public and employers' views toward handicapped workers. These attitudes appear to vary by community and are also highly dependent upon the type of handicapped individual involved.[4] And, of course, in businesses where there is immediate contact with the general public, the employers' perceptions of public attitudes toward given types of handicapped persons is extremely important. Informational variables are related to the degree of public and employer knowledge of and information about the vocational rehabilitation program. Here again, the translation of latent public support into an operationally effective program is necessary, and this is partially dependent upon an understanding of the program.

In dealing with many of these variables, it is important to realize that public and employer attitudes are not independent of each other. The employer is part of the community, and the relative degree of enlightenment or non-enlightenment which is characteristic of the community at large is also likely to be characteristic of or to effect many employers within the community.

Through the analysis of data obtained through community and agency personnel surveys, it will be possible to assess the direction and potential for the placement of handicapped persons in the State.

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[1] As Herbert Rusalem has noted, "Placement success is a complex variable governed by a variety of factors such as the level of economic activity, the type of community, the availability of adequate rehabilitation services, the skill and tenacity of placement workers, the climate of employer attitudes toward disabled workers, and the attributes of the client population for whom placement is sought." "Placeability of Older Disabled Clients," *Vocational Guidance Quarterly*, (Autumn 1961), pp. 38-41. Among the studies which have been conducted are a large number dealing with the employment potential of specific disability and age groups. See, for example, David Landy and Wilmot D. Griffith, "Placement of the Emotionally Handicapped: Employer Willingness and Counselor Practice," *Journal of Rehabilitation*, 24 (July-August 1958), pp. 4, 17-18; Irving Barshop, "Policy and Practice in Hiring Impaired Workers." *Journal of Rehabilitation*, 25 (November-December 1959), pp. 6, 23-25; Melvin L. Schwartz and Raymond D. Dennerll, "The Employable Epileptic; Fact, Fiction, and Contradiction," *Journal of Rehabilitation*, 33 (January-February 1967), pp. 1, 36; J. S. Felton and C. Spencer, *Blocks to the Employment of the Paraplegic, Part II: A Study of Employer Attitudes* (Los Angeles: University of California, 1960); Martin Moed and Dorothy Litwin, "The Employability of the Cerebral Palsied," *Rehabilitation Literature*, 24 (September 1963), pp. 266-271, 276; and Howard Rusk, *et al.*, *Specialized Placement of Quadriplegics and Other Severely Disabled* (Vocational Rehabilitation Administration, U.S. Department of Health, Education, and Welfare, 1963).

[2] For a summary of some of the more important attitudinal variables effecting the handicapped, see Harold E. Yuker, J. R. Block, and Janet H. Young, *The Measurement of Attitudes Toward Disabled Persons* (New York: Human Resources Center, 1966). On the situational and information variables, one of the better studies is the *Survey of Employers' Practices and Policies in the Hiring of Physically Impaired Workers* (New York: Federation Employment and Guidance Service, 1959). In dealing with employer attitudes, a number of items have been drawn from the study noted above and from *Attitudinal Barriers to Employment, Minnesota Studies in Vocational Rehabilitation, Bulletin No. 32* (University of Minnesota, 1961).

[3] On the effect of size and type of business, see *Survey of Employers' Practices and Policies in the Hiring of Physically Impaired Workers*, *op. cit.*, p. 22.

[4] *Ibid.*, p. 27. See also the literature relating to specific disability types and placement problems. On the variations by type of community as well as by disability types, see *The Measurement of Attitudes Toward Disabled Persons*, *op. cit.*, especially Chapters 4 and 5.

Program Support by the Public

In the five Virginia communities in which surveys were conducted, public support for the proposition that handicapped persons should be helped in order to be able to work was extremely high. Moreover, this support was related to the assessment of the need to help the handicapped within each community. Thus, 83 percent of all respondents agreed not only that the handicapped should be helped but that helping them was an important problem within their respective communities.

Moreover, the reasons which respondents gave for supporting help for the handicapped were highly related to benefits for the handicapped and only minimally related to generally community benefits. Few respondents rationalized their support for helping the handicapped in terms of "the eventual decrease of the welfare program," "the need of employers for labor," or "the gradual lifting of the tax burden." Rather, the emphases were upon such factors as "the handicapped need and deserve help," "the handicapped should be able to work," and "the handicapped could, if helped, lead better and more useful lives." What is apparent, then, is that support for helping the handicapped to work is primarily based upon the rationale that the personal benefits of the vocational rehabilitation program for the handicapped individual are paramount.

There was also wide public support for governmental involvement in training the handicapped. From 70 to 78 percent of the respondents in each community said that it was better for government or for government and private groups to train the handicapped than to have private groups alone conduct the program. Support of this magnitude is generally considered to be consensual support for public policy.[5]

The Public's Knowledge of the Program

Despite the strong public support for the vocational rehabilitation program, a majority of the persons in our samples had never heard nor read about the Virginia vocational rehabilitation program. In only one community—Augusta County—had a majority of the respondents heard or read anything about the vocational rehabilitation program in the State.

Moreover, a large majority of the respondents did not know of a place within their respective communities where a handicapped person who needed vocational rehabilitation assistance could go for help. Again, the striking exception was Augusta County, where over three-fourths of the respondents had knowledge of where a handicapped person could go. It is clear that the Woodrow Wilson Rehabilitation Center is well recognized within the Augusta County area, and this provides at least some minimal knowledge of the vocational rehabilitation program for residents of Augusta County. In an area such as Wise County, however, there are neither rehabilitation facilities nor workshops, and public knowledge about the rehabilitation program is minimal.

Public Attitudes toward the Handicapped

Thus far, program support and knowledge of the vocational rehabilitation program have been examined. It is clear that widespread public support is not matched by public information about the program. However, this type of latent support can be extremely important if it extends to enlightened attitudes about personal associations with the handicapped. Of primary concern is the public reaction toward working alongside handicapped persons with given types of disabilities, and it is clear that, in most instances, there is no strong public reaction.

Most respondents did not react negatively toward working alongside handicapped persons with physical disabilities. Over three-fourth of the persons in our sample did not object at all to working with persons having visual or hearing impairments, orthopedic or functional impairments, or amputations. In addition, 71 percent registered no objection at all to working with persons having speech impairments.

In relative terms, there was a reaction against persons with mental or emotional problems or with particular types of acute diseases.[6] From 23 to 35 percent of the respondents objected somewhat or objected a great deal toward working with persons who had mental or emotional problems, who were mentally retarded, who had been alcoholics or addicted to drugs, or who suffered from epilepsy or other types of seizures, even though these persons had received rehabilitation treatment. It is important to note, however, that while there is a more negative reaction toward these types of disabilities as opposed to the more obvious physical disabilities, a majority of the respondents registered no objection at all to working alongside persons with any of these disabilities.

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[5] For an elaboration of this point, see: Lewis Bowman, "Views of Government and Private Involvement in Training the Handicapped in Virginia," *The University of Virginia News Letter*, 44 (April 15, 1968), pp. 29-32.

[6] This differentiation is not atypical. See, for example, *The Measurement of Attitudes Toward Disabled Persons*, *op. cit.*, Chapter 5.

It is apparent, therefore, that public attitudes toward the handicapped are highly positive in terms of employment. It is equally apparent, however, that the positive nature of these attitudes is at least partially dependent upon the type of disability which a handicapped person has. Given the rather primitive manner in which American Society has traditionally approached mental illness and emotional problems, it is not surprising that there is some public reaction against working with people who suffer from these types of problems. What is encouraging, however, is that a majority of persons within the five communities are receptive toward working with the non-physically handicapped.

A number of other attitudinal characteristics are also noteworthy. First, 89 percent of all respondents agreed "quite a bit" with the proposition that people with mental handicaps need and deserve help as much as people with physical handicaps. Second, 86 percent agreed "quite a bit" that a state with poor hospitals and facilities for helping people with mental illness should try to improve its facilities even if this meant spending more money.

Nevertheless, many persons did not perceive others as equally concerned about the handicapped. Only 38 percent of the respondents agreed "quite a bit" with the statement that people in general are concerned with helping the handicapped, and only 35 percent voiced similar agreement with the proposition that most people don't mind working with handicapped persons. An equally low level of strong agreement was also evidenced in the response to the question that most employers will hire handicapped persons if they are properly trained.

What is indicated, then, is that substantial numbers of persons perceive the attitudes of the general public and of employers as relatively unenlightened. In terms of public attitudes, however, this pessimism is not warranted. Within the five communities, attitudes toward the handicapped are encouraging. Most persons do not react in a negative manner toward working with the handicapped, although there is some strong reaction toward working with persons who have or have had particular types of disabilities. Moreover, there appears to be a very positive approach toward helping the mentally handicapped. Attitudes toward the handicapped, therefore, are quite positive. There is, however, a definite gap in public knowledge about the program. A majority of respondents had never read or heard about Virginia's rehabilitation program and did not think that others in their communities were well informed about the program. Yet, of those who had an opinion, more than 90 percent felt that people in the vocational rehabilitation program should do more to let the public know about their work.

It is clear that latent support exists not only for the vocational rehabilitation program as an abstraction but also for the real aims and intent of the program. Further, public attitudes toward the handicapped do not consitute a barrier against the employment of the handicapped. It is equally apparent, however, that educating the public about the program is necessary. People simply do not know enough about vocational rehabilitation for it to assume high visibility, and this means that much of the support which has been noted will remain latent. It also means that reaction against particular types of disabilities will not be diminished quickly. Thus, one of the most important steps toward increasing the placement potential of the handicapped would be to educate the public about the rehabilitation program and to translate latent support into manifest support.

Recommendation (Immediate 4): Make concentrated efforts to inform the public about the State's Rehabilitation Program in order to educate the public about the problems of specific disability groups.

Employers' Attitudes

In addition to public attitudes, the attitudes and characteristics of employers constitute other important variables in assessing the potential for employment of the handicapped. In order to gain information about these variables, a survey of rehabilitation counselors in DVR and employment counselors in the Virginia Employment Commission was conducted. Since these agency personnel are involved in the actual placement of handicapped individuals, their assessments of employment potential for handicapped persons are quite meaningful in providing a realistic picture of the problems involved in employing the handicapped.

According to counselors in both agencies, the size of a given business affects the probability of placing handicapped persons. The least promising businesses, in terms of size, are those with fewer than four employees. The most promising businesses are those within the range of 4-49 employees, while businesses with from 50-249 employees are viewed as somewhat less promising. Rehabilitation and employment counselors were in substantial agreement that very large (250 or more employees) and very small (fewer than 4 employees) businesses had only a minimal potential for handicapped placement. The potential of medium-sized businesses (4-49 and 50-249 employees), however, was viewed as relatively more promising.[7]

In assessing the resistance within given types of businesses toward hiring the handicapped, there was substantial variation, in some cases, between counselors in the two agencies. In relative terms, however, resistance within the construction and transportation industries was estimated to be higher than among other industries.[8] Resistance within government and service businesses, however, was perceived as relatively low, while the manufacturing and wholesale and retail trades industries occupied the middle range.

It should be noted, however, that with the exception of government and service type businesses, rehabilitation counselors' estimates of resistance and extreme resistance within the remaining types of businesses were lower than were estimates by employment counselors. And in the estimates for the construction and manufacturing industries, these differences were substantial.

In the aggregate, then, rehabilitation counselors perceived less resistance among employers than did employment counselors. Nevertheless, there was agreement that particular types of industries were less resistant toward hiring the handicapped than were others.

Recommendation (Immediate 12): As part of their In-Service Training, inform rehabilitation counselors about the placement opportunities for handicapped persons with government agencies (State and Local) and with service industries. Further encourage rehabilitation counselors to place more clients with government agencies and service industries.

As might be expected, the difficulty of placing handicapped workers is partially dependent upon the types of positions in which they are to be placed. Employment and rehabilitation counselors agreed that the most difficult positions in which to place handicapped individuals were those involving outside sales, while the least difficult were those involving services. With these exceptions, however, there was substantial disagreement between rehabilitation and employment counselors concerning the difficulty in placing handicapped persons in blue-collar and white-collar positions. Rehabilitation counselors felt that the handicapped could be placed in blue-collar jobs (skilled and unskilled positions) more easily than in upper-level white-collar positions (professional, managerial, and technical). The estimates by employment counselors concerning relative ease of placement were quite the opposite.

It appears, therefore, that while counselors in both agencies agreed that difficulty of placement was related to the type of position involved, they were in partial disagreement about the nature of this relationship. Again, with the exception of outside sales and service personnel, employment counselors perceived difficulty of placement as diminishing with movement toward higher-level positions, while rehabilitation counselors estimated that the difficulty of placement diminished with movement toward the lower-level positions.

The greatest resistance within business organizations toward the hiring of the handicapped is, according to counselors in both agencies, found among supervisors and foremen. There was agreement that the least resistance occurred among workers, a finding that corresponds to the public attitudes. It appears, therefore, that the attitudes of fellow workers are positive in terms of working with handicapped individuals. It is also clear, however, that there is substantial resistance at the management, personnel, and supervisory levels.[9]

With the exception of speech impairments, employment counselors estimated greater resistance toward placement of all types of disabilities than did rehabilitation counselors. In two cases—persons with orthopedic or functional impairments and amputees—the estimates differed substantially. While only 29 percent of the rehabilitation counselors stated that persons with orthopedic or functional impairments would encounter resistance or extreme resistance from employers, 62 percent of the employment counselors estimated that this type of resistance would occur in attempting to place the orthopedically or functionally impaired. In a similar manner, 40 percent of the rehabilitation counselors as opposed to 67 percent of the employment counselors felt that amputees would meet resistance or extreme resistance from employers. The most extreme resistance, according to all counselors, would occur in trying to place persons with mental and personality disorders. It is significant, however, that resistance toward the hiring of the physically handicapped, while relatively lower than among the mentally handicapped, is estimated to be relatively high.[10] In all comparable cases, the estimates of employer resistance toward given types of disabilities are substantially higher than was the incidence of negative attitudes among the general public.

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[7] In a New York study, placement potential for the physically impaired was found to be relatively more promising among very large firms with 500 or more employees. *Survey of Employers' Practices and Policies in the Hiring of Physically Impaired Workers, op. cit.*, p. 22. A national survey, however, concluded that "Almost without exception, State reports indicated that it is the large employer in the local labor market which has the high rigid physical requirements, policies against hiring handicapped formulated in a home office elsewhere, or labor-management agreements that all new hirees will start at the bottom—usually with jobs requiring hard fast physical work." *Employer Resistance to Hiring the Handicapped: A Survey Summary* (Washington, D.C.: President's Committee on Employment of the Physically Handicapped, 1956), p. 2.

[8] The three industries cited as most resistant here—construction, manufacturing, transportation—have been among those found to present the greatest difficulty to hiring the handicapped on a national basis. See *Employer Resistance to Hiring the Handicapped, op. cit.*, pp. 2-3.

[9] The rankings here are similar to those reported in *Attitudinal Barriers to Employment, op. cit.* As noted in a related study, operational hiring practices affecting the handicapped are rarely the result of written policies; "rather, they are often a combination of individual views and the prevailing 'company climate' toward the physically impaired." *Survey of Employers' Practices and Policies in the Hiring of Physically Impaired Workers, op. cit.*, p. 25.

Recommendation (Immediate 13): DVR and CVH should, through mobilization of public support and specific educational and informational programs, minimize employers' resistance toward the handicapped. Efforts should be made to encourage positive attitudes and support among management. Further, particular attention should be given to personnel directors, clerks, supervisors and foremen in an effort to decrease resistance in operational hiring practices. (Programs designed to reach the supervisors and foremen should utilize the cooperation of unions.)

Age Groups

According to counselor estimates, placement is easiest for persons between the ages of eighteen and thirty-five. Rehabilitation counselors estimated greater difficulty in placing handicapped persons in the eighteen to twenty-five category rather than did employment counselors. Conversely, employment counselors perceived greater difficulty in the placement of handicapped persons between the ages of twenty-six and thirty-five than did rehabilitation counselors. Most important, however, counselors agreed that placement prospects were relatively poor for persons over thirty-six years of age, and very few counselors responded that the age of a handicapped person made no difference in terms of placement.[11]

Recommendation (Immediate 14): Instruct rehabilitation counselors to make special efforts to increase placement opportunities for disabled persons thirty-six years of age or older.

A number of factors—including the age and disability of a handicapped individual, the type of job for which he is trained, and the size and type of business in which he is to be placed—affect placement potential. There are other factors, however, which appear to affect employer attitudes.

According to rehabilitation and employer counselor assessments, employer resistance toward hiring the handicapped is the result of several factors. Counselors in both agencies estimated that the most important factors were the increased Workmen's Compensation and other statutory benefits and the lack of versatility of handicapped workers.[12] In addition, extra training for handicapped workers and the responsibility of employers to take care of their own employees who become handicapped were also perceived as relatively important factors behind employer resistance. Negative public reaction was not considered to be particularly important, and again, this supports the findings of the community surveys.

In general, counselors in both agencies believed that a lack of employer understanding of the effectiveness of proper "matching" was more important than basic resistance on the part of employers in mitigating against the employment of the handicapped. A majority of counselors, however, estimated that the combination of both factors—resistance and lack of understanding—provided the basic difficulty in attempting to place handicapped workers.

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[10] Most studies dealing with the question of employer resistance by disability have dealt with single disabilities or with physical or mental handicaps as an isolated group. In general, however, the relatively higher resistance toward the hiring of persons with non-physical disabilities reported here appears to be representative. See, for example, ***The Measurement of Attitudes Toward Disabled Persons, op cit.***, Ch. 5.

[11] As Rusalem reported, "Some classifications of disability present unusually difficult placement problems. One of these groups is the older disabled worker." Rusalem, ***op cit.***, p. 38. Here, again, counselor estimates are in accordance with findings in other areas of the country.

[12] In a national survey, 80 percent of the respondents cited workmen's compensation costs and two-thirds of the respondents cited lack of versatility of handicapped workers as reasons for not hiring the handicapped. In states having "good workmen's compensation laws and second-injury funds," however, the concern with workmen's compensation costs was substantially reduced. ***Employer Resistance to Hiring the Handicapped, op. cit.***, p. 3. It would appear that a second-injury fund which is understood by employers can affect what is apparently the most frequently mentioned barrier to employment.

Recommendation (Immediate 16): Inform employers about the effectiveness of proper "matching" (placement of handicapped in jobs for which they are trained and able to perform).

It appears that specific problems—such as workmen's compensation costs, employer attitudes about the versatility and needs of handicapped workers, and so forth—are barriers toward employing the handicapped. Nevertheless, a more general problem is the lack of information which employers have about the vocational rehabilitation program and the "matching" process for handicapped workers.

An overwhelming majority of rehabilitation and employment counselors stated that employers were not able to understand or to accept or reject on its merits the vocational rehabilitation program of Virginia's rehabilitation agencies because of the lack of publicity which these programs received.

The importance of this information "gap" is similarly evident in the counselor estimates of the effectiveness of various proposals for lowering employer resistance toward the handicapped. Ninety-one percent of the employment counselors and 87 percent of the rehabilitation counselors agreed that increased publicity for the placement programs of Virginia's rehabilitation agencies would be effective or very effective in lowering employer resistance. While other proposals were viewed as potentially less effective, there was agreement that such steps as the establishment of a second-injury fund, tax incentives for hiring the handicapped, and educational programs directed toward non-disabled programs could reduce employer resistance toward the handicapped.

It is striking that increased publicity was viewed as potentially more effective than tax incentives for enhancing placement possibilities for the handicapped. It appears that employers as well as the general public are not well informed about the rehabilitation program, and this lack of information at both levels may constitute a severe impediment to the effectiveness of the rehabilitation program.

If, however, employers are to be "educated" about the program, an important aspect of this educational process should be related to the experience which other employers have had with handicapped workers. According to the counselors, employers who have hired the handicapped are quite positive in their attitudes toward handicapped workers. A majority of counselors in both agencies were in agreement or strong agreement that employers who had hired the handicapped felt that handicapped workers were better than "normal" workers, had better attendance records, were less accident prone, and were highly motivated. Counselors also agreed, however, that handicapped workers were viewed as accident risks, as having health problems, as having emotional problems, and as being difficult to fire. In general, however, positive attitudes were viewed as significantly more prevalent than negative attitudes.[13] Thus, the experience of those who have hired the handicapped could be quite effective in persuading other employers of the benefits of hiring the handicapped.

Recommendation (Immediate 15): Encourage all businesses to eliminate architectural barriers in order to facilitate the employment of the handicapped.

Recommendation (Soon 8): Contract with individual employers to provide work experience and on-the-job training for groups of handicapped persons.

Recommendation (Immediate 8): Educate employers throughout the State about the positive benefits of employing the handicapped.

Recommendation (Interim 11): The State should adopt an effective Second-Injury Fund Law. This Law should conform to the coverage outlined in the Council of State Governments "Suggested Legislation for Broad Type Coverage Second- or Subsequent-Injury Funds."

Recommendation (Interim 26): Offer State tax incentives during the training period for businesses willing to train and to hire handicapped persons in meaningful positions.

Recommendation (Immediate 11): Instruct rehabilitation counselors to make greater efforts in minimizing union resistance toward the placement of handicapped workers.

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[13] As the New York study reported, "Past experience with disabled employees is an important element, not only in the policy toward hiring, but in the actual hiring as well. Those firms which—because of past experience—report a relatively more favorable policy toward hiring the disabled also report that they have hired such workers in fact." *Survey of Employers' Practices and Policies in the Hiring of Physically Impaired Workers, op. cit.*, p. 42. In general, employers agree that the handicapped make good workers. It remains, however, to demonstrate the specific benefits which result from hiring the handicapped and employers who have hired the handicapped could provide the most persuasive evidence of these benefits.

Recommendation (Immediate 10): Instruct rehabilitation counselors to maintain effective liaison with medium-size businesses (those with 4-49 and 50-249 employees) and to establish more effective liaison with larger businesses (those having 250 or more employees).

Administration of Vocational Rehabilitation Programs

Personnel Recruitment[1]

One of the major concerns in vocational rehabilitation programs is the shortage of well trained personnel.[2] While there are many areas of activity and concern in closing the rehabilitation manpower gap,[3] it is generally agreed that some of the most important areas focus on problems of recruiting people into the field and retaining them once they have entered rehabilitation work.[4] In fact, many programs have been initiated to try to recruit potential employees into vocational rehabilitation work.[5]

In light of the general importance of recruitment and retention, it is important to examine a number of factors relating to the recruitment and retention of rehabilitation personnel in Virginia. Such factors include the public image of the rehabilitation worker and the respect accorded him, opportunities for career advancement, and the general satisfaction with and image of the job being done.[6]

More specifically, the concern is with the pathways to rehabilitation work followed by these people, and the views of Virginia's rehabilitation personnel on recruitment into the program.

Pathways to Rehabilitation Work. The first general area to be discussed relates to the actual recruitment routes followed by Virginia's rehabilitation personnel. Specific questions to be considered include the following: Where are these people from? When and why did they become seriously interested in working in the vocational rehabilitation program? What other job did they consider, and why did they choose rehabilitation work? Is there any evidence that prior experience with disability is related to their choice of careers? Is the occupation of one's father related to the choice to enter rehabilitation work? Finally, is there any evidence that one's choice to work in the rehabilitation program is related to the employment of relatives by the State government?

Length of Residence in Virginia. The initial consideration is whether Virginia's rehabilitation personnel have been recruited from long-time residents of the State or from relative newcomers to Virginia. Most of the Department of Vocational Rehabilitation's professional personnel have lived in Virginia for a number of years; 29 percent of the DVR counselors and 44 percent of the DVR supervisors have lived in this State all of their lives; and 21 percent of the DVR counselors and 13 percent of the DVR supervisors have lived in Virginia over twenty years (but not all of their lives). It is interesting to notice, however, that while very few of the DVR supervisors have lived in Virginia less than twenty years, over 40 percent of the DVR counselors have lived in the State less than twenty years with 26 percent being residents of the State less than five years. Even though the largest part of both groups of DVR personnel have lived in Virginia for a relatively long time, there are many more newcomers to the State in the ranks of the counselors than in the ranks of the supervisors. The newcomers to Virginia are particularly evident among school unit and mental and correctional unit counselors, with 40 percent of each group moving into the State within the last five years; there is a much smaller percentage of new residents among the field counselors. When the DVR supervisors are broken down into central and field supervisors, we see that most of the field supervisors have lived in Virginia at least twenty years; and almost three-fourths have been residents of the State all of their lives. The central office supervisors are split into two groups—those (41 percent) who have lived all their lives in Virginia and those (42 percent) who have lived less than ten years in the State.

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[1] For a detailed analysis of this problem as it relates to Virginia see Report No. 2, *The Backgrounds and Recruitment of Vocational Rehabilitation Counselors and Supervisors in Virginia,* and Report No. 5, *The Retention of Vocational Rehabilitation Personnel in Virginia,* in the series, "Vocational Rehabilitation in Virginia" (Charlottesville: Institute of Government, June, 1968, *mimeo.*).

[2] See, for example, Morton H. Bregman, "The Utilization of Rehabilitation Counseling Support Personnel: A Statement of Policy of the National Rehabilitation Counseling Association," in *Selection, Training, and Utilization of Supportive Personnel in Rehabilitation Facilities,* a report on a conference sponsored by the Arkansas Rehabilitation Research and Training Center and Association of Rehabilitation Centers, Inc., at Hot Springs, Arkansas, on September 26, 27, 28, 1966, p. 75. Also see Stanley Smits, *Rehabilitation Counselor Recruitment Study, Final Report* (Washington, D.C.: Department of Health, Education, and Welfare, Vocational Rehabilitation Administration, September, 1964); and Marvin B. Sussman and Marie R. Haug, "The Practitioners: Rehabilitation Counselors in Three Work Settings," Working Paper No. 4 in *Career Contingencies of the Rehabilitation Counselor* (Cleveland, Ohio: Department of Sociology and Anthropology, Western Reserve University, June, 1967, pp. 1-2. For some material on the problem in U.S. H.E.W. Region III see Keith C. Wright, "Report Prepared from the Region III Institute on Vocational Rehabilitation Manpower Needs" (Based on the proceedings of a workshop held in Charlottesville, Virginia, on March 5-7, 1967).

[3] These include efforts to utilize more effectively the social work personnel available, as well as efforts to improve education and training programs for rehabilitation personnel.

[4] See Closing the Gap . . . in Social Work Manpower (Washington, D.C.: Department of Health, Education, and Welfare, November, 1965), Chapter VII, esp. p. 69.

[5] One such program designed to recruit people into the field of occupational therapy is described in Mary C. Van Benschoten, "Undergraduate Student Careers—A Summary," Proceedings of the Twelfth Annual Workshop of the Association of Rehabilitation Centers, Chicago, December, 1963, and Selected Papers from Eleventh Annual Workshop, Boston, December, 1962, ed. C. Esco Oberman (Washington, D.C.: United States Vocational Rehabilitation Administration, 1965), p. 103.

[6] *Closing the Gap . . . in Social Work Manpower* (Washington, D.C.: Department of Health, Education, and Welfare, November, 1965), p. 69. Also see "Beyond the Money Question," *Manpower Utilization in Rehabilitation in New York City, ed. Frances A. Koestler* (New York: New York City Regional Interdepartmental Rehabilitation Committee, 1966), pp. 31-33.

Consideration of personnel employed by the Commission for the Visually Handicapped (CVH) indicates that half of the CVH counselors have lived in Virginia all of their lives while about one-fifth (21 percent) have lived in the State five years or less. Here, as with the DVR personnel, most have been fairly lengthy residents of the State, although over 40 percent have lived in Virginia less than twenty years.[7]

It seems that most of Virginia's professional rehabilitation personnel are relatively long-time residents of the State. At the same time, however, it should be remembered that a sizeable proportion have moved into the State within the last five years; this is particularly true of DVR school unit and mental and correctional counselors and of CVH counselors. These distributions generally hold when the DVR counselors and supervisors are considered according to specific types.

A large majority of all three types of counselors first became interested since 1960, while less than half of each group of supervisors became initially interested that recently; again as might be expected, a larger proportion of central supervisors than of field supervisors became interested prior to 1960.

Initial Interest in, and Choice of, Vocational Rehabilitation as a Career. Choosing an occupational field as one's life work is a complex process and may obviously be done in a variety of ways. Often no conscious choice is made as a person drifts into an occupation almost by chance on the basis of its availability. Such negative selection is most usually associated with the choice of a nonprofessional job which requires little training, but it can also occur in the professions.[8]

Many of the established professions such as medicine, law, and teaching are well known to young people long before they enter college; and often choices to enter these fields are made fairly early in life. Because of the recency of the development of rehabilitation counseling as an occupation (being developed in its present form only since 1943) and because of a general lack of public awareness, this field is not very well known to most people who might be attracted to it. For example, one study of students preparing to follow a career in rehabilitation work found that nearly half first heard of this occupation only after entering college.[9]

In Virginia a majority (66 percent) of the DVR counselors indicated that they became interested during the last eight years; and only 8 percent said that they first became interested before 1950. A large proportion (38 percent) of the DVR supervisors said that they first became interested in rehabilitation work as a career during the years since 1960; but, as might be expected, proportionately more supervisors than counselors indicated that their initial interest in this occupation came earlier than 1960.

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[7] At the time the data were collected, CVH had only two supervisors. They are not treated in the analysis because of this small number.

[8] The general discussion on career choice here and in the following paragraph is taken from Marvin B. Sussman, Marie R. Haug, and James Trela, "Profile of the 1965 Student Rehabilitation Counselor," Working Paper No. 3 in *Career Contingencies of the Rehabilitation Counselor* (Cleveland, Ohio: Department of Sociology and Anthropology, Western Reserve University, August, 1966), p. 15; Marvin B. Sussman and Marie R. Haug, "Rehabilitation Counseling Leadership: Present and Potential," Working Paper No. 5 in *Career Contingencies of the Rehabilitation Counselor* (Cleveland, Ohio: Department of Sociology and Anthropology, Case Western Reserve University, November, 1967), pp. 15-16. Also, for some material on career choice in general, see James A. Davis, *Undergraduate Career Decisions: Correlates of Occupational Choice* (Chicago: Aldine Publishing Company, 1965).

[9] Sussman, Haug, and Trela, "Profile of the 1965 Student Rehabilitation Counselor," Working Paper No. 3, p. 15.

Although almost half of the CVH counselors were in the "no answer/don't know" category, most of those answering the question (38 percent of the total) said that they first became interested in vocational rehabilitation as a career after 1960; only one counselor said that he first became interested before that date.

The general conclusion, then, is that Virginia's rehabilitation personnel as a whole became interested in this occupation relatively recently; this is especially true of the counselors (both DVR and CVH) and Department of Vocational Rehabilitation field supervisors. This reflects both the fact that rehabilitation counseling has developed in its present form fairly recently, and the fact that many of the counselors are quite young.

Perhaps more important than when Virginia's rehabilitation personnel became seriously interested in this type of work is the reason *why* they became interested at that time. As far as DVR counselors are concerned, there is no real concentration of answers given as first responses to this query. The two most important general reasons are: (1) the respondent was ready for a career change at that time and (2) the respondent was attracted by the personal satisfaction rehabilitation work offers. Department of Vocational Rehabilitation supervisors also give a wide variety of general answers. The two reasons given most often as first responses are that the respondent was attracted by the personal satisfaction offered by rehabilitation work and that the respondent became interested because of contact with the vocational rehabilitation program in his former position.

The CVH personnel also gave a wide variety of general reasons for their initial interest in vocational rehabilitation work. The two most common responses were that the respondent was interested in a career change at that time and that the respondent's educational and/or employment background suited him for rehabilitation work.

When all of the general reasons are considered together, it appears that the most important reason for initial interest in a rehabilitation career relates to the personal satisfaction such a career offers. Insofar as one specific reason can be said to stand out, more DVR personnel mentioned that they initially became interested because they wanted a career in which they could work with and/or help people than for any other reason.

Most of the DVR and CVH personnel were interested in another career before they chose rehabilitation work. Only 7 percent of the Department of Vocational Rehabilitation counselors, 5 percent of the DVR supervisors, and 15 percent of the Commission for the Visually Handicapped counselors were interested in *no* other career. Both of the CVH supervisors considered other careers. This pattern generally applies to all types of DVR counselors and supervisors.[10]

The Department of Vocational Rehabilitation personnel were particularly interested in careers related to education. While many general careers were mentioned as careers in which these people had been interested before getting into rehabilitation work, almost one-third of the DVR counselors and over one-third of the DVR supervisors said that they were previously interested in a career in education. Furthermore, each individual group of DVR counselors and supervisors stressed education as the career in which they were previously interested.

Beyond this general stress on education related careers, there is less similarity between the DVR counselors and supervisors on the other career considerations; the second most frequently mentioned career consideration for the counselors was "social services" (with 20 percent mentioning this), while the second most frequently mentioned career consideration for the supervisors was "sales and clerical work" (15 percent).

The most common specific response for both Department of Vocational Rehabilitation counselors and supervisors concerned a career in teaching below the college level; no specific career was emphasized.

The responses of the Commission for Visually Handicapped personnel are fairly evenly distributed among the various categories; no more than three career considerations were in the same general category. It is interesting to note that only one of the CVH personnel said that he had been interested in a career related to education.

In short, then, the DVR personnel were previously interested in a number of types of careers with the largest number of both counselors and supervisors being interested in the field of education. The CVH personnel were previously interested in a number of types of careers with none being particularly stressed.

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[10] Studies conducted at Western Reserve University in Cleveland of rehabilitation personnel throughout the nation and of students in various leading universities preparing to go into rehabilitation work reveal that most rehabilitation personnel have considered other careers before going into rehabilitation work; therefore, the Virginia personnel are similar to other rehabilitation workers with respect to this point. See Sussman, Haug, and Trela, "Profile of the 1965 Student Rehabilitation Counselor," Working Paper No. 3, pp. 15-17; Sussman and Haug, "The Practitioners: Rehabilitation Counselors in Three Work Settings," Working Paper No. 4, pp. 16-18; and Sussman and Haug, "Rehabilitation Counseling Leadership: Present and Potential," Working Paper No. 5, pp. 14-18.

Virginia's DVR personnel are quite similar to rehabilitation personnel elsewhere insofar as the most common previous career consideration was educational in nature.[11] In this respect the CVH personnel in Virginia differ markedly from both the DVR personnel in Virginia and the rehabilitation personnel studied elsewhere.

While a large percentage of rehabilitation personnel elsewhere were interested earlier in careers related to other professions such as law and medicine, relatively few of Virginia's rehabilitation personnel indicated similar earlier interests. In some respects, then, Virginia's rehabilitation personnel resemble rehabilitation workers elsewhere with respect to earlier career interests, but in other respects they differ from those rehabilitation workers on this point.

In an effort to find out about the reasons for their choice, we asked these people to tell us why they finally chose vocational rehabilitation as a career. The leading first response for all groups of personnel is that the respondent chose vocational rehabilitation work because he liked the type of work in general. Fifty percent of the Department of Vocational Rehabilitation counselors, 43 percent of the DVR supervisors, and 40 percent of the Commission for Visually Handicapped counselors mentioned a reason in this general category first. Another important first response for DVR personnel, especially supervisors, is that the respondent chose vocational rehabilitation work because of the personal satisfaction it offered. There is no other concentration of first responses for the CVH counselors because of the large percentage (46 percent) who gave no reason for choosing rehabilitation work as a career and because those who gave a reason other than the one already mentioned distributed their responses fairly widely.

When all of the reasons for choosing rehabilitation work as a career are considered together, the leading reason for both DVR and CVH personnel is that they chose this career because they liked the type of work. The next general reason most often mentioned by DVR counselors (24 percent) and by DVR supervisors (54 percent) is related to the personal satisfaction VR work offers. However, none of the CVH personnel mentioned this as a reason for their choice of careers. The second reason for CVH counselors (24 percent) was that the respondent's employment and/or educational background suited him for VR work. This reason was a factor in the decision of relatively few of the DVR personnel, however.

Other Factors Possibly Related to Recruitment into VR Work. In many cases a person's career choice may be related either directly or indirectly to some earlier experience.[12] For example, a person who chooses rehabilitation work as his career may well have been influenced by some earlier contact with disability. Certainly this factor appears to have been related to the recruitment of at least some of Virginia's rehabilitation personnel.

Relatively few of the DVR counselors (16 percent) had experience with personal disability, but this was a possible recruitment factor for more than 33 percent of the DVR supervisors. CVH personnel had even more experience with personal disability as all of the CVH supervisors, and 62 percent of the CVH counselors had such experience.

Overall, fewer rehabilitation personnel had experience with disability of a parent or sibling. None of the CVH personnel and only one-fifth of the DVR counselors and 18 percent of the DVR supervisors indicated that they had had such experience.

Even fewer of the personnel said that they had had experience with a spouse or child being disabled. Again none of the CVH personnel and less than 5 percent of the DVR personnel had had experience with a disability to such a person.

As far as experience with disabilities of other relatives is concerned, a number of the personnel indicated that they had such experience. Twenty-three percent of the DVR counselors, 18 percent of the DVR supervisors, and 15 percent of the CVH counselors (and none of the CVH supervisors) had had experience with the disability of other relatives.

More DVR counselors (41 percent) had experience with disability of people other than their relatives than had experience with disabilities of the other people (relatives) just discussed. Experience with nonrelatives' disabilities was not too important (in terms of numbers) for DVR supervisors in that only 18 percent said that they had such experience. Quite a few of the CVH personnel answered that they had experience with the disability of nonrelatives; 31 percent of the counselors and half of the supervisors answered in this way.

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[11] For a more detailed discussion of other careers considered by other rehabilitation personnel see the material in the three works cited in footnote 10 above. For some material on the importance of interest in a career in the field of education in the recruitment of rehabilitation personnel in general see Marceline Jaques, *Critical Counseling Behavior in Rehabilitation Settings* (Iowa City: State University of Iowa, College of Education, 1959).

[12] See Lee G. Burchinal, *Career Choices of Rural Youth in a Changing Society*, Publication No. 142 (University of Minnesota, 1962).

In short, while there are variations from one set of rehabilitation personnel to another, it can be said that *many* of these people had experience with disability of some type before they chose VR work as a career. While our data does not allow us to say how important this experience was as far as choosing VR work is concerned, it does indicate that it could have been a factor, either direct or indirect, in their recruitment process.

In addition to previous experience with disability, the occupation of one's father may be related to the decision to make rehabilitation work a career.[13]

Beyond the above point, it is also to be expected that certain types of parental occupations might predispose a person to be interested in a rehabilitation career, and that they might be vitally involved in his eventual choice to become involved in such a career. A consideration of the occupations of the fathers of Virginia's rehabilitation personnel, however, does not indicate that any one general type of occupation was particularly important in this respect. The occupations of the fathers are distributed widely among the general occupational categories. When the categories are combined into white-collar and blue-collar occupations, there is a somewhat disproportionate concentration of white-collar backgrounds. Forty-seven percent of the DVR counselors, 49 percent of the DVR supervisors, and 38 percent of the CVH counselors had fathers with white-collar occupations. This same pattern of wide distribution of occupations also holds for each of the component groups of DVR counselors and supervisors. So rehabilitation counseling, as other professions, tends to draw from those whose fathers held white-collar occupations. While there is no concentration of occupations, it can be seen that few of the fathers were service workers or unskilled workers and almost none were unemployed.

Given the wide distribution of fathers' occupations, the general conclusion on this point seems to be that no one or two types of paternal occupations were particularly important in the recruitment process of Virginia's rehabilitation personnel. (However, it should be noted that our data are quite limited on this point, and some occupations may have been much more important in the recruitment process than is readily apparent.)

The employment of relatives by the State or by subdivisions is another factor which might be involved in the recruitment of people into rehabilitation work. Thirty percent of the DVR counselors, 25 percent of the DVR supervisors, and 29 percent of the CVH counselors reported having one or more relatives employed by the State or its subdivisions. Most of those who said that they had relatives so employed indicated that only one of their relatives was working for the State. A majority of all groups of DVR counselors and supervisors said that they had no relatives employed by the State or by its subdivisions; this is especially true for school unit counselors and for field supervisors. The employment of relatives by the State or its subdivisions does not appear to be a factor in the recruitment of most of the personnel in Virginia's rehabilitation program, although obviously it may be a factor for some.

Prestige and Professionalism as Factors in Recruitment. A number of other factors may be related to recruitment into vocational rehabilitation work. For instance, the recruitment of personnel is related to the attractiveness of a rehabilitation career and this in turn is related to such things as the prestige and the degree of professionalization of rehabilitation work.

In an effort to find out about problems relating to recruitment into Virginia's rehabilitation program, we asked the rehabilitation personnel if they thought it is difficult for this State to find qualified rehabilitation workers. A majority of the rehabilitation personnel answered this question affirmatively. A particularly large proportion of DVR supervisors (79 percent) and CVH counselors (77 percent) said that it is difficult for this State to find qualified rehabilitation personnel. While fewer of the DVR counselors thought that this is a problem, it is still clear that well over a majority (67 percent) felt that it is difficult for Virginia to find qualified rehabilitation workers.

The DVR personnel seem to stress the idea that recruitment problems are related to unattractive working conditions of VR counseling in general (this general reason includes specific reasons such as low salary, poor promotion opportunities, low prestige, and inadequate financing of the program).

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[13] It has been found, for instance, that there is a relationship between the occupation of a person's parents and his own attitudes toward public service in general; thus, it is to be expected that there is a relationship between the occupation of a person's parents and his own attitude toward getting involved in a public service occupation: see Frank K. Gibson and George A. James, "Student Attitudes Toward Government Employees and Employment," *Public Administration Review,* 27 (December 1967), p. 433.

Other oft-mentioned general reasons for the difficulties involved in recruiting qualified rehabilitation personnel in Virginia were: "training facilities are poor and inadequate" and "there is an increased need for VR counselors." It appears that the leading specific reason given was that the VR salary is lower than for other professional salaries for which a potential counselor might qualify.[14] Other specific reasons mentioned quite frequently are that there are too few training facilities producing well-trained personnel and that there is a nationwide shortage of VR counselors in general. The other responses were distributed widely among a number of other specific reasons.

In light of the foregoing, a few conclusions can be drawn beyond saying that while most rehabilitation personnel in Virginia said that they think Virginia has difficulty in recruiting qualified rehabilitation counselors there is not a great deal of agreement among those personnel on the reasons for this perceived difficulty.

Occupation Prestige. The higher an occupation's prestige, the more attractive it will be to potential recruits and to the people already involved in that type of work.[15] In an effort to get some information on the prestige of rehabilitation work, we asked the personnel interviewed to rank eight professions on the basis of the prestige they enjoy with the public. Of course, it must be remembered that the rehabilitation workers' perception of the public prestige of these various occupations (two of which are public rehabilitation counseling and private rehabilitation counseling) may not be accurate, but it should give an indication of their perceptions of the way rehabilitation work ranks in relation to some other occupations.

When asked how the public rates public rehabilitation counseling in terms of prestige, the responses varied sharply from one type of personnel to another. While very few of either the DVR or CVH personnel felt that their occupation is rated low by the public, there were mixed feelings about exactly how high rehabilitation counseling is rated on the prestige scale. Only 31 percent of the DVR counselors and only 26 percent of the DVR supervisors indicated that they thought the public rates this occupation high in prestige; while 40 percent of the DVR field counselors and 31 percent of the DVR central supervisors said that the public rates public rehabilitation counseling high; this falls off sharply for the other groups of DVR counselors and supervisors in that only 23 percent of the field supervisors, 20 percent of the school unit counselors, and 13 percent of the mental and correctional counselors felt that the prestige of this occupation rated that high.

The CVH personnel thought the public rates public rehabilitation counseling higher than did the DVR personnel. Thirty-eight percent of the CVH counselors and one of the CVH supervisors said that the public rates this occupation high. However, just as with the DVR personnel, a majority of CVH personnel said that the public ranks their occupation no higher than medium in prestige. Considered overall, fewer rehabilitation personnel (both DVR and CVH) in Virginia said that the public rates public rehabilitation counseling high in prestige than said that the public rates teaching and nursing high in prestige.

Virginia's rehabilitation personnel in general felt that the public rates *private* rehabilitation counseling relatively low in prestige. Only 21 percent of the DVR counselors, 13 percent of the DVR supervisors, 8 percent of the CVH counselors, and one of the CVH supervisors said that the public rates this occupation high on the prestige scale. On the other hand, 25 percent of the DVR counselors, 33 percent of the DVR supervisors, 16 percent of the CVH counselors, and one of the CVH supervisors indicated that they thought the public ranks private rehabilitation counseling low on the scale of prestige. Each separate group of DVR counselors and supervisors gave the same general distribution of answers. In general, then, it appears that the rehabilitation personnel in the aggregate feel that the public ranks private rehabilitation counseling lower in prestige than teaching, nursing, or public rehabilitation counseling, although obviously there are some who feel that this occupation does rank high in public prestige.

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[14] This stress on problems related to noncompetitive salaries is not surprising in light of the emphasis this problem usually receives in recruitment and retention. For example, a 1964 study found that "both the State VR agencies and private agencies listed low salaries as one of their major problem areas in attracting and retaining competent personnel." See S. Norman Feingold, "Issues Related to a Study of the Influence of Salary, Methods of Selection, Working Conditions, Supervision, and mobility upon Selection, Training, and Retention of Counseling Personnel," *Counselor Development in American Society,* Conference Recommendations from Invitational Conference on Government-University Relations in the Professional Preparation and Employment of Counselors (Washington, D.C.: 1965), pp. 147-152, esp. p. 151. Also, other studies have shown that poor pay scales are a general problem in recruitment into a given occupation. For instance, this was one of the chief criticisms made by the employees of the Virginia Department of Welfare and Institutions in a study reported in summary form in the *Richmond Times-Dispatch,* October 3, 1967.

Of course, it must be remembered that a relatively poor pay scale is not the only important reason given for general recruitment problems in Virginia's rehabilitation program; this is certainly underscored by the wide range of other general and specific reasons reported in the text.

[15] For a more detailed development of this point see Marie R. Haug and Marvin B. Sussman, *Professionalism and the Public* (Cleveland: Western Reserve University, n.d., mimeographed). The relationship between salary and occupational prestige is mentioned also by Feingold, "Issues Related to a Study of the Influence of Salary, Methods of Selection, Training, and Retention of Counseling Personnel," *Counselor Development in American Society,* p. 139. Also see "Beyond the Money Question," *Manpower Utilization in Rehabilitation in New York City,* ed. Frances A. Koestler, p. 31.

Considering all of the answers given, it seems that the largest numbers of rehabilitation personnel feel that teaching is the most prestigious occupation (Table 4.79). This is followed by nursing and by *public* rehabilitation counseling. These personnel in the aggregate feel that other social workers rank lowest in prestige, followed by occupational therapists and *private* rehabilitation counselors.

It is of interest to note that while the rehabilitation personnel in Virginia generally did not rank their own profession as high as either teaching or nursing, almost one-third (30 percent) felt that the public rates rehabilitation counseling high (either first or second) in prestige; and this is considerably higher than the percentage (17 percent) of New England rehabilitation counselors rating public rehabilitation counseling that high on the prestige scale.[16] While there is some feeling of prestige inferiority among the rehabilitation personnel in Virginia, therefore, it is certainly not as acute as it is among the New England personnel. Furthermore, relatively few of Virginia's rehabilitation personnel feel that their occupation is rated low on the prestige scale in comparison with several related professions considered (except teaching and nursing). In general, then, it appears that while feelings of inferiority may be an obstacle in the recruitment (and retention) of qualified rehabilitation personnel in this State, it is not as big a problem as it may be in other areas. (This is not intended to present a misleading picture, however, because it should be clear that feelings of prestige inferiority among Virginia's rehabilitation personnel may be a problem in recruitment worthy of further efforts at eradication.)

TABLE 4.79—Rehabilitation Personnel's Perceptions of Public Ratings of the Prestige of Eight Occupations

	Percent Rating Public's View As:	
Occupation	*High**	*Low***
Teacher	77	17
Nurse	69	30
Public rehabilitation counselor	62	31
Physical therapist	46	43
Psychiatric social worker	44	49
Private rehabilitation counselor	39	54
Occupational therapist	30	63
Other social workers	19	75

* One to four on a scale of one to eight.

** Five to eight on a scale of one to eight.

Professionalism. "The characteristics of an occupation which make it a profession are basically the utilization of a unique scientific body of knowledge and an orientation of self-sacrificing service to others, from which flows a public grant of autonomy. . . ."[17] It is generally agreed that the more professional an occupation is, the more attractive it is in terms of prestige and status. Often the ethos of professionalism attracts people, and retains them, in occupations which are otherwise relatively unrewarding. In recent years rehabilitation personnel have generally shown a great deal of concern with elevating the standards and increasing the level of professionalization of their occupation.[18] The success of their efforts may contribute much to increasing the attractiveness of rehabilitation work and thus to reducing some of the problems related to the shortage of qualified personnel in this type of work.

We attempted to get some information on the professionalization of vocational rehabilitation in

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[16] See George J. Goldin, "Some Rehabilitation Counselor Attitudes Toward Their Professional Role," *Rehabilitation Literature,* 27 (December 1966), pp. 363-364, esp. Table 6.

[17] Sussman, Haug, and Trela, "Profile of the 1965 Student Rehabilitation Counselor," Working Paper No. 3, p. 25.

[18] Goldin, "Some Rehabilitation Counselor Attitudes Toward Their Professional Role," *Rehabilitation Literature,* p. 360. For some more material on professionalism in general and on the professionalization of rehabilitation work in particular, see Marvin B. Sussman, Marie R. Haug, and Gloria A. Krupnick, "Professional Associations and Memberships in Rehabilitation Counseling," Working Paper No. 2 in *Career Contingencies of the Rehabilitation Counselor* (Cleveland, Ohio: Department of Sociology and Anthropology, Western Reserve University, October 1965), pp. 1-3; also Haug and Sussman, *Professionalism and the Public,* p. 139; John R. McGowan (ed.), *An Introduction to the Vocational Rehabilitation Process: A Manual for Orientation and In-Service Training,* Rehabilitation Service Series No. 555 (Washington, D.C.: Department of Health, Education, and Welfare, Vocational Rehabilitation Administration, 1964); and Marvin B. Sussman, "Occupational Sociology and Rehabilitation," *Sociology and Rehabilitation,* ed. Marvin B. Sussman (Washington, D.C.: American Sociological Association, 1966).

Virginia by asking the rehabilitation personnel if they read professional journals regularly and if they belong to professional organizations.[19] As far as reading professional journals regularly is concerned, most of the DVR personnel answered affirmatively. Seventy-five percent of the DVR counselors and all of the DVR supervisors said that they read such literature regularly. Furthermore, this general pattern applies to each of the separate groups of DVR counselors and supervisors. However, slightly fewer of the CVH personnel answered this question affirmatively.[20]

In addition to the high proportion of both DVR and CVH personnel who reported that they read professional journals regularly, a majority of these personnel said that they belong to at least one professional association. All of the DVR and CVH supervisors, 92 percent of the CVH counselors, and 78 percent of the DVR counselors belong to professional organizations. Further, 85 percent of the DVR supervisors, 85 percent of the CVH counselors, both of the CVH supervisors, and 49 percent of the DVR counselors hold multiple memberships in professional associations (i.e., they belong to more than one organization). Overall, then, the record is pretty good on this point.[21] The DVR counselors have the lowest percentage of professional association members, but well over a majority of these personnel hold such memberships. Moreover, over 70 percent of each group of DVR counselors and supervisors belong to these organizations.

In conclusion, this limited examination of professionalism in Virginia's vocational rehabilitation program indicates that most of this State's rehabilitation personnel meet the norms of professional behavior insofar as these are related to reading professional journals regularly and to belonging to professional associations. Certainly they compare favorably on these points with rehabilitation personnel in other regions and in the nation as a whole. In the long run, and possibly in the short run, this behavior could enhance the attractiveness of rehabilitation work in Virginia, and this in turn could help in the recruitment of qualified personnel.

Recommendation (Interim 29): Create in DVR the post of "Director of Recruitment."

Recommendation (Interim 32): Establish a Speakers Program for high schools to inform students of opportunities in Vocational Rehabilitation counseling and to advise them about preparing for such a career.

Recommendation (Soon 15): Develop college training programs, at both the undergraduate and graduate level, designed to produce Vocational Rehabilitation personnel needed in the future.

Recommendation (Long Range 10): There should be further study of training programs and Vocational Rehabilitation curricula to facilitate development of adequate programs at colleges and universities in Virginia.

Personnel Retention

As a Problem. Studies have shown and common sense indicates many factors involved in the retention of personnel in a given occupation, job satisfaction is one of the most important.[1] General job satisfaction

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[19] One dimension of the professionalism of an occupation, according to Sussman and Haug, is the extent to which the people engaged in that occupation meet the norms of professional behavior; this includes keeping current on new developments in the field through membership in professional associations and through reading professional journals. For more on this point see Sussman and Haug, "Rehabilitation Counseling Leadership: Present and Potential," Working Paper No. 5, p. 28.

[20] For some information on professional rehabilitation journals see Sussman, Haug, and Krupnick, "Professional Associations and Memberships in Rehabilitation Counseling," Working Paper No. 2, pp. 4-8.

[21] A 1965 study reported that 64 percent of the nation's public VR personnel belonged to professional associations; thus Virginia has a larger percentage of association members than the nation as a whole. Virginia's percentage of memberships is also above the percentage for any region of the country, including the South (the 1965 study reported that the South had the highest proportion of memberships with 74 percent of that region's VR personnel belonging to professional organizations). For the complete details of the 1965 study see Sussman, Haug and Krupnick, "Professional Associations and Memberships in Rehabilitation Counseling," Working Paper No. 2, pp. 13-16. (Also the study is reported in Marvin B. Sussman, Marie R. Haug, and Gloria A. Krupnick, "Rehabilitation Associations and Memberships in Rehabilitation Counseling," *Rehabilitation Literature,* 27 (December, 1966), pp. 354-359).

[1] This stress on noncompetitive salaries as an important part of the retention problem is not unusual insofar as other studies have found this to be related to the difficulties involved in keeping qualified personnel in rehabilitation work. See, for example, S. Norman Feingold, "Issues Related to a Study of the Influence of Salary, Methods of Selection, Working Conditions, Supervision, and Mobility upon Selection, Training and Retention of Counseling Personel," *Counselor Development in American Society,* Conference Recommendations from Invitational Conference on Government-University Relations in the Professional Preparation and Employment of Counselors (Washington, D.C.: 1965) pp. 147-152.

This is not to argue, of course, that other reasons are involves satisfaction with many different aspects of the job such as salary, opportunities for promotion, and work conditions, and dissatisfaction with one or a combination of these may contribute wholly or in part to a decision to leave the occupation for another, more attractive one.

In order to find out about the job satisfaction of Virginia's rehabilitation personnel, we asked them a series of questions about their feelings toward various aspects of their jobs. Many of Virginia's rehabilitation workers feel that noncompetitive salaries are a major cause of this State's inability to keep qualified people in its vocational rehabilitation program.

A majority of the DVR counselors said that they are at least satisfied with their salary scale, but only 11 percent said that they are *very satisfied* on this point. On the other hand, a majority of the DVR supervisors indicated that they are *not* satisfied with their salary scale.

When the DVR counselors and supervisors are examined according to their component groups, however, it can be seen that a majority of each group of counselors and of the central supervisors said that they are *at least* satisfied with their salary. The most dissatisfied group of DVR personnel are the field supervisors, a majority of whom said that they are not satisfied with their salaries.

As far as the feelings of the CVH personnel are concerned, many indicated that they are not satisfied with their salaries. A majority of the CVH counselors said that they were dissatisfied with their salaries.

With respect to salaries, then, it may be said that this is not too much of a problem for the majority of DVR counselors and of DVR central supervisors, but it may be a much more serious problem for a majority of the DVR field supervisors and CVH personnel. Also, a number of DVR counselors and central supervisors said that they are not satisfied with their current salaries. In short, dissatisfaction with salary may be an important *potential* cause of future turnover within the ranks of Virginia's vocational rehabilitation personnel.

In terms of comparative mean salary ranges, however, Virginia's vocational rehabilitation personnel do not appear necessarily to be in as noncompetitive a situation as they perceive (Table 4.80). The Virginia salary range for them is above the national average, although it is below two of the states in the Department of Health, Education, and Welfare Region III.

A majority of the DVR counselors and supervisors said they are either "very satisfied" or "satisfied" with the promotion process in Virginia's vocational rehabilitation program; less than one-fourth of either group indicated that they are not satisfied on this point.[2] Furthermore, this general distribution of answers applies to each of the separate groups of DVR counselors and supervisors.

In sharp contrast to the DVR personnel, however, the CVH counselors said that they are not very satisfied with the promotion process. Only about one-third of the CVH counselors responded that they are satisfied on this count, and a *majority* said that they are either dissatisfied or very dissatisfied with the promotion process.

Relatively few of the DVR personnel are dissatisfied with the general work conditions in Virginia's

TABLE 4.80—A Comparison of Mean Salary Ranges Among Vocational Rehabilitation Agencies, January 1, 1968

Mean Salary Range for Counselors	
Virginia	$7,032-9,168
Kentucky(a)	5,760-7,344
Maryland	7,170-9,417
North Carolina(a)	6,708-8,520
West Virginia	7,200-9,420
District of Columbia	6,734-8,759
United States	6,971-8,909

(a) Longevity payments are added to this base pay range.
SOURCE: United States Department of Health, Education, and Welfare, Office of State Merit Systems, *State Salary Ranges* (Washington, D.C., January, 1968) pp. 34-35.

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not important in the loss of qualified rehabilitation personnel; this is suggested both by the distribution of responses in the present study and by many other studies such as the one reported in R. L. Green, M. R. Palmer, and T. J. Sanger, "Why They Leave: A Study of Public Service Resignations and Morale," *New Zealand Journal of Public Administration,* (September, 1967), pp. 17-38. Also see "Little Things That Make a Big Difference," *Manpower Utilization in Rehabilitation in New York City,* ed. Frances A. Koestler (N.Y.: New York City Regional Interdepartmental Rehabilitation Committee, 1966); and Edward E. Lawler, III, "Attitude Surveys and Job Performance," *Personnel Administration,* (September-October, 1967), p. 4.

[2] For more general information on the importance of sufficient opportunities for advancement in the retention of personnel in a given occupation, see Vocational Rehabilitation Administration, *Characteristics of Vocational Rehabilitation Counselors Hired by or Separated From State Vocational Rehabilitation Agencies During Fiscal Year 1961,* Regional Representatives Memorandum No. 62-23 (Washington, D.C.: Department of Health, Education, and Welfare, Vocational Rehabilitation Administration, March 7, 1963). Also see *Closing the Gap . . . in Social Manpower* (Washington: Department of Health, Education, and Welfare, November, 1965).

rehabilitation program. Eighty-six percent of the DVR counselors and eighty-seven percent of the DVR supervisors said that they are either "satisfied" or "very satisfied" with respect to this point.

The CVH personnel also indicated that they are generally satisfied with their work conditions. Both of the CVH supervisors and 85 percent of the CVH counselors said that they are either "very satisfied" or "satisfied" with this aspect of their jobs.

In general, then, dissatisfaction with work conditions does not seem to be an important source of discontent among the rehabilitation personnel in Virginia. While relatively few may leave rehabilitation work because of unsatisfactory work conditions, however, this might be the deciding factor for those who expressed dissatisfaction on this point; thus, efforts to provide good working conditions should not be dismissed as unimportant.[3]

Most of Virginia's rehabilitation personnel, both DVR and CVH, are at least satisfied with their treatment as professionals by their superiors and by the State agency. Eighty-seven percent of the DVR counselors and 85 percent of the DVR supervisors said that they are "satisfied" or "very satisfied" on this aspect of their jobs. This pattern of general satisfaction applies to each of the separate types of DVR counselors and supervisors, too. The CVH personnel are even more satisfied in the aggregate on this point than are the DVR personnel; only one of the CVH employees indicated any dissatisfaction at all with this aspect of the job.

For the most part, the personnel interviewed indicated that they are also quite satisfied with their treatment as professionals by the public with whom they deal. The DVR workers are particularly satisfied on this point; over 90 percent of both the counselors and the supervisors said that they are either "satisfied" or "very satisfied" with this part of their job, and only 6 percent of the DVR counselors and none of the DVR supervisors indicated any dissatisfaction.

The CVH personnel are also quite satisfied with their treatment as professionals by the public with whom they deal.

On the two points examined thus far, therefore, we may conclude that the two most important areas of job discontent among Virginia's rehabiliation personnel relate to the salaries they receive and the promotion process; this is especially true for the CVH personnel. On the other points discussed, most of the personnel said that they are at least satisfied (and many indicated that they are very satisfied). This would seem to indicate, then, that the major efforts at improvement should be directed at the salary scale and the promotion process.

Recommendation (Interim 43): Adjust supervisors' salary scales upward.

Recommendation (Interim 14): Continue to maintain at least the regional average salary for all Vocational Rehabilitation personnel.

Recommendation (Interim 42): Adjust promotion process for counselors in DVR and CVH by creating counselor "D" category for senior counselors.

Production Quotas. Other factors involved in general job satisfaction are related to the pressures of meeting production quotas, the extent of independent action of the rehabilitation personnel, the feelings of these people with respect to recognition for a good job, and the degree of communication between the personnel and their superiors.

Most of the DVR personnel said that counselors are put under some pressure to meet production quotas; only 14 percent of the counselors and none of the supervisors replied that counselors are never put under such pressure. Almost half (48 percent of the counselors and 49 percent of the supervisors) of both groups said that counselors are put under production pressures fairly often or almost always. The DVR central supervisors, mental and correctional counselors, and field counselors particularly thought that counselors in Virginia are often put under pressure to meet production quotas.

In the aggregate, the CVH personnel did not perceive production pressures on counselors to the same extent that the DVR personnel did. Only one of the CVH counselors and one of the CVH supervisors felt that counselors are put under such pressure often (i.e., fairly often or almost always), and 38 percent of the counselors said that production pressure is never applied to counselors.

Almost three-fourths of the DVR counselors stated explicitly that they should not be given such quotas, but only about one-third (31 percent) of the supervisors replied in this way. While the DVR central supervisors were evenly divided between those favoring quotas and those opposing quotas, few of the DVR field supervisors were in opposition.

The CVH counselors were overwhelmingly opposed to giving production quotas to counselors; only one of the counselors indicated support for such quotas. The reasons for opposing production quotas for counselors varied widely.

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[3] On the general importance of good working conditions in retaining competent personnel in an occupation, see "Little Things That Make a Big Difference," *Manpower Utilization in Rehabilitation in New York City, op. cit.*, p. 36.

Overall, the DVR counselors emphasized the idea that counselors should be interested in serving clients rather than in production quotas. These workers also frequently said that quotas impair the quality of vocational rehabilitation services in general and that quotas pressure the counselor to accept only easy cases. The largest proportion of the DVR supervisors opposing quotas for counselors said that counselors should be allowed to set realistic goals for themselves in keeping with their professional status. One-fourth of the DVR supervisors also gave the following reasons for opposing quotas: (1) placement can occur only when clients can handle jobs, (2) quotas pressure counselors to accept only easy cases, and (3) counselors should have goals rather than quotas. The CVH counselors in opposition to quotas for counselors stressed that closures are an unfair system of measurement because each counselor works in a unique environment with its own special problems and that counselors should be interested in serving clients for their own sakes rather than to meet quotas.

It may be said that most counselors, both DVR and CVH, indicated they opposed being given such quotas. On the other hand, rehabilitation supervisors, both DVR and CVH, indicated they were much more in favor of counselors having quotas. This difference of opinion between the counselors and supervisors (in the aggregate) may be a potential source of personnel discontent. Even though many of the counselors who oppose production quotas do not feel expecially pressured to meet these quotas, this issue may contribute to the problems of retaining rehabilitation personnel in Virginia.[4]

Recommendation (Interim 33): Increasingly emphasize the importance of establishing and maintaining "Proper Balance" between *quality* of the counselor's work and the number of "Closures" realized.

Independence on the Job. Another factor which may be related to job satisfaction in Virginia's vocational rehabilitation program is the degree of independence an employee has in performing his job. While it is true that most people expect some supervision from their superiors, it is also true that many people, especially those who view themselves as competent professionals, also expect a degree of independence of action in their jobs. If the independence of action is not sufficient, many may become dissatisfied and go into another occupation.[5]

In answer to a question about the degree of independent action they exercised in doing their job, most of the rehabilitation employees interviewed indicated that they had a great deal of independence. Not only did the personnel interviewed say that they had a great deal of independence in performing their job; most of them said they had a sufficient degree of independence. The DVR supervisors are the least satisfied on this point, but only 15 percent of these workers said that the degree of independent action which they have is insufficient.

The central supervisors are the least satisfied group, but a large majority (69 percent) of them said that they had a sufficient degree of independence of action. The field supervisors indicated general satisfaction in this point, with 85 percent feeling that their independence of action is sufficient.

In general, then, it appears that discontent is not a major problem for most of the people working in Virginia's rehabilitation program. Most of the personnel said they had quite a bit of independence, and a big majority said the degree of independence is sufficient.

Recognition of Work. Another factor involved in job satisfaction, and ultimately in the retention of personnel, concerns the employees' feelings about recognition for the quality of work they do.[6] As far as this factor is concerned, most of Virginia's rehabilitation personnel said that they receive proper recognition *at least sometimes* for the work they do. In fact, only 9 percent of the DVR counselors, only 5 percent of the DVR supervisors, and none of the CVH

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[4] It should be noted that most of the rehabilitation personnel in Virginia, both DVR and CVH, said that they felt rehabilitation counselors in other states are also put under pressure to meet production quotas. This may contribute to a lessening of discontent about production quotas among those rehabilitation workers in Virginia who oppose having such quotas in that they may feel that they are not put under pressures applied to their counterparts in other areas. On the other hand, however, this may drive many from the rehabilitation field altogether if they come to feel that such pressure is one of the universal problems of rehabilitation work which can only be escaped by leaving the occupation.

[5] This was one factor in the loss of some public service workers in New Zealand in 1966; see Green, Palmer and Sanger, "Why They Leave . . . ," *op. cit.*, pp. 24-27.

[6] Marilyn J. Lister, "Performance Evaluation of the New Staff Member," *Journal of the American Physical Therapy Association*, (April, 1966), p. 387.

personnel said that they never receive proper recognition for their work. It should be noted, however, that while a large proportion of each group of these workers said that they receive proper recognition often or almost always, a reasonably large proportion also said that they receive such recognition fairly infrequently (i.e., "sometimes"). Indeed 47 percent of the DVR counselors, 41 percent of the DVR supervisors, 31 percent of the CVH counselors, and half of the CVH supervisors said that they are given proper recognition only "sometimes." This general distribution of responses applies also to each group of DVR counselors and supervisors considered separately. Of special interest is the fact that several of the DVR central supervisors said that they never receive proper recognition for their work. Improper recognition, then, is probably a source of job dissatisfaction for some of the rehabilitation workers in the State. However, it is also probable that those who said that they never receive proper recognition and many of those who said that they receive proper recognition only sometimes may be dissatisfied with the improper recognition they feel they are given. Thus, insofar as this may be a source of discontent for some employees and possibly a contributing factor in the loss of rehabilitation personnel, efforts should be made to recognize good work whenever possible.

Communication with the Central Office. Another factor which may be related to job satisfaction and to retention is the amount of communication between the rehabilitation personnel and the Richmond office.[7] Sixty-eight percent of the DVR counselors and 65 percent of the DVR field supervisors indicated that they have fairly frequent communication with the Richmond office; fewer than one-third of the counselors or field supervisors said that they have little or no such communication. There was no significant divergence from this general pattern when the different groups of DVR counselors were considered separately.

The CVH counselors indicated that they have even more communication in the aggregate with the Richmond office than the DVR personnel interviewed. All of these personnel said that they communicate with the central office fairly frequently (46 percent said they communicate "fairly often" and 54 percent said that they have "frequent" communication with the Richmond office).

In spite of the fairly large number of personnel who indicated that they have fairly frequent communication with the Richmond office, a relatively large proportion of personnel, both counselors and supervisors, said that there should be more communication than there is presently. A particularly large percentage (72 percent) of the DVR school unit counselors and a fairly large proportion (46 percent) of the DVR central supervisors were of this view.[8]

Fewer CVH personnel than DVR personnel said that there should be more communication between the field workers and the central office. Thirty-eight percent of the CVH counselors and none of the CVH supervisors said that the present communication between the field personnel and those in the Richmond office is adequate.

While there is communication between those in the field and those in the Richmond office, many of the personnel feel that there should be more communication. For those of this opinion, the inadequate communication which they perceive could lead to dissatisfaction with their jobs and could be a factor in the loss of rehabilitation personnel. This could become a particularly serious problem as far as DVR school unit counselors are concerned.

Personnel Training

Pre-Service Training.[1] Two types of pre-service training concerned here are education and previous job experience. Both may be important factors in a person's preparation to perform the tasks involved in vocational rehabilitation work.

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[7] Lack of sufficient communication between counselors and the central office may limit the effectiveness of the rehabilitation program, and this may cause discontent among the rehabilitation personnel who want an effective program. See "The Information Gap," *Utilization of Rehabilitation Manpower in the Community Setting,* ed. Frances A. Koestler (New York City Regional Interdepartmental Rehabilitation Committee, 1967) pp. 30-31.

[8] It should be noted that the rehabilitation personnel in this State do not see lack of communication between the central office and the field personnel as a problem unique to themselves. Although many said that they did not know whether this is a problem in other states, most of those who replied said that lack of communication between rehabilitation personnel is a problem in other states; more specifically, 67 percent of the DVR counselors expressing an opinion, and 67 percent of the CVH personnel expressing an opinion indicated that they perceived lack of communication to be a problem for rehabilitation programs in other states.

[1] Some of the problems in, and requirements for, training people to work with mental retardation are outlined in *Occupations in the Care and Rehabilitation of the Mentally Retarded* (Washington, D.C.: United States Employment Service, United States Department of Labor, n.d.). Related to working with mental retardation is the complex task of working with mental patients. Personnel in these areas must be given particularly complex training; see, for example, Jerry Dincin, "Utilization of Porfessional Staff in

As far as formal education is concerned, the Department of Vocational Rehabilitation (DVR) and Commission for the Visually Handicapped (CVH) personnel in Virginia are relatively well prepared.[2] In the Fall of 1967 all of the DVR and CVH counselors were college graduates, and 58 percent of the DVR counselors and 79 percent of the CVH counselors had graduate or professional training beyond the undergraduate level. In aggregate, the DVR mental and correctional counselors had a particularly high level of formal education; almost three-fourths had graduate or professional training beyond the B.A. level. Overall, the rehabilitation counselors in Virginia were no less prepared than DVR counselors nationally.

As a group the Virginia DVR supervisors had more formal education than the national norm for supervisors. While 25 percent of the national group had only a B.A. level of education,[3] considerably less (13 percent) of the DVR supervisors in Virginia had only a B.A. level of education.

For the most part, Virginia's vocational rehabilitation personnel were educated at Virginia's colleges and universities or in the colleges and universities of other Southern states. Almost one-half of the DVR counselors received their education in the colleges and universities of this State, and another one-third of them attended the colleges and universities of other states in the South. Over one-third of the CVH counselors attended colleges or universities in Virginia, and another one-third received their higher education in other Southern states. Almost two-thirds of the supervisors in both agencies attended Virginia's colleges and universities.

The rehabilitation personnel in Virginia majored

Psychiatric Rehabilitation," *Social Work,* 10 (January, 1965), pp. 51-57. For some general material on the training requirements for rehabilitation workers and on the complexities of rehabilitation work in general, see *Health Resources Statistics* (Washington, D.C.: National Center for Health Statistics, Public Health Service, Department of Health, Education, and Welfare, 1965), Chapter 30 and Chapter 34.

The general need for adequately trained rehabilitation personnel is made greater (and more difficult) by the fact that rapid technological and social change is constantly expanding and changing these requirements; see Reuben J. Margolin, "Trained Trainers are Needed to Prepare Staff for the Rehabilitation Revolution," *Training Methods in Vocational Rehabilitation,* Report No. 2 of the Committee on Training Materials and Aids (Washington, D.C.: Vocational Rehabilitation Administration, United States Department of Health, Education, and Welfare, 1966) pp. 8-14. This point is also made in Robert E. Kinsinger, "Education and Training for Technicians in the Health Field," *Selection, Training, and Utilization of Supportive Personnel in Rehabilitation Facilities,* a report on a Conference Sponsored by the Arkansas Rehabilitation Research and Training Center and Association of Rehabilitation Training Centers, Inc., at Hot Springs, Arkansas on September 26, 27, 28, 1966, p. 3.

A good example of the high degree of training needed for rehabilitation work is the fact that all rehabilitation counselors are expected and required to have competence and facility to use medical information in their work; for a more complete consideration of this aspect of training see the articles collected in Joint Liaison Committee of the Council of State Directors of Vocational Rehabilitation and the Rehabilitation Counselor Educators, "Medical Information in the Rehabilitation Counseling Curriculum," Monograph No. 4 in *Studies in Rehabilitation Counselor Training* (Los Angeles: California State College at Los Angeles, 1964).

[2] It should be noted that training is closely related to the general topic of manpower needs in vocational rehabilitation because the level of high training and educational requirements have contributed to the problems of closing the manpower gap in vocational rehabilitation. For some general material on the manpower shortage in vocational rehabilitation see Morton H. Bregman, "The Utilization of Rehabilitation Counseling Support Personnel: A Statement of Policy of the National Rehabilitation Counseling Association," *Selection, Training, and Utilization of Supportive Personnel in Rehabilitation Facilities,* A Report on a Conference Sponsored by the Arkansas Rehabilitation Research and Training Center and Association of Rehabilitation Centers, Inc., at Hot Springs, Arkansas on September 26, 27, 28, 1966, p. 75; Stanley Smits, *Rehabilitation Counselor Recruitment Study, Final Report* (Washington, D.C.: Department of Health, Education, and Welfare, Vocational Rehabilitation Administration, September, 1964); Marvin B. Sussman and Marie R. Haug, "The Practitioners: Rehabilitation Counselors in Three Work Settings," Working Paper No. 4 in *Career Contingencies of the Rehabilitation Counselor* (Cleveland, Ohio: Department of Sociology and Anthropology, Western Reserve University, June 1967), pp. 1-2; Celia Benney, "The Role of the Caseworker in Rehabilitation," *Social Casework,* (March, 1955), n.p.; and Benjamin Frank and Nick Pappas, "Introduction," *Targets for In-Service Training,* A Report of a Seminar Convened in Washington, D.C., May 45, 1967 by the Office of Law Enforcement Assistance and the Joint Commission on Correctional Manpower and Training (Washington, D.C.: Joint Commission on Correctional Manpower and Training, October, 1967), pp. 1-2. For some material on the problem in the Department of Health, Education, and Welfare Region III see Keith C. Wright, "Report Prepared From the Region III Institute on Vocational Rehabilitation Manpower Needs" (Based on the proceedings of a workshop held in Charlottesville, Virginia on March 5-7, 1967).

[3] Marvin B. Sussman and Marie R. Haug, "Rehabilitation Counseling Leadership: Present and Potential," Working Paper No. 5 in *Career Contingencies of the Rehabilitation Counselor* (Cleveland, Ohio: Department of Sociology and Anthropology, Case Western Reserve University, November, 1967), p. 8.

in a wide variety of subjects as undergraduates. Not surprisingly, however, the undergraduate majors of most of the personnel were either social sciences, psychology, or education. Subjects in the area of the social sciences were the undergraduate majors of the largest proportion of each group of personnel except the CVH supervisors.

Of those who attended graduate or professional schools, most majored in education. The other leadings subject areas were psychology, social sciences, and professional fields in general.

As far as the major areas of study are concerned, the rehabilitation personnel in Virginia in 1967 did not differ noticeably from the rehabilitation workers in other parts of the nation.[4]

Recommendation (Interim 35): Establish a scholarship aid program for college students (undergraduate) who agree to pursue a career in VR work for at least the length of time of their scholarships (students who accept VR scholarships funding and do not enter the profession or do not remain in the profession at least the time of their scholarship would be required to compensate the agency to the extent of the unfilled term).

Recommendation (Long Range 11) Expand college scholarship aid program (undergraduate) to provide for increasing costs and increasing need for Vocational Rehabilitation personnel.

Over one-half of the positions previously held by vocational rehabilitation personnel were of a professional type. Experience in previous professional positions was particularly prevalent among the DVR unit counselors; almost three-fourths of the positions which they had held previously were professional.

However, it should be noted that a very large proportion of the professional positions were concentrated in the two areas of public school-related and social and welfare occupations.

Recommendation (Interim 34): Stress the possibility of recruiting from more diverse backgrounds—in terms of training and pre-service occupations.

In-Service Training. It is not enough to pay attention only to the training received by vocational rehabilitation personnel prior to entering rehabilitation work. Rapidly changing technological and social developments necessitate a program of continuing training of personnel even after they have entered the vocational rehabilitation field.[5] Further, even if rapid and frequent changes did not make such in-service training necessary, in many cases gaps in pre-service training would still need to be eliminated through in-service training programs.[6]

Virginia has acted to provide in-service training for its vocational rehabilitation personnel. For example, new counselors with the Department of Vocational Rehabilitation who are in need of introductory professional and technical training and basic counseling skills may receive training through programs affiliated with West Virginia University or with Richmond Professional Institute.[7] It is also possible for rehabilitation personnel in Virginia to attend conferences, seminars, and classes which are not a part of full-scale in-service training programs, but which are designed to advance the skills of the rehabilitation workers.

In order to get more information on vocational rehabilitation in-service training in Virginia, we asked the counselors and supervisors a number of questions about their attitudes toward and involvement in such programs and classes.

The initial question concerns whether the vocational rehabilitation personnel in Virginia have taken education courses in rehabilitation counseling or in related fields since getting into rehabilitation work. A majority of both the DVR and CVH personnel said they have taken such courses. This is especially true of the CVH personnel (only one of whom reported not having such courses since becoming involved in this State's rehabilitation program). Sixty-eight percent of the DVR counselors and 56 percent of the DVR supervisors answered that they have taken courses since getting into rehabilitation work in Virginia. Moreover, a majority of each of the component groups of DVR counselors and supervisors indicated that they have taken courses of this nature. The field supervisors have the lowest proportion (54 percent) of DVR personnel answering this question affirmatively while the mental and correctional counselors have the highest proportion (75 percent).

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[4] One study of male rehabilitation counselors in 14 states found a wide variety of college majors and minors with a concentration in education and social studies; see Salvatore G. DiMichael, "The Professed and Measured Interests of Vocational Rehabilitation Counselors," *Educational and Psychological Measurement,* 9 (Spring, 1949), pp. 59-72. It should be noted, however, that a more recent study of students preparing to go into rehabilitation work stressed majors in psychology more than did the Virginia rehabilitation personnel; see Marvin B. Sussman, Marie R. Haug, and James E. Trela, "Profile of the 1965 Student Rehabilitation Counselor," Working Paper No. 3 in *Career Contingencies of the Rehabilitation Counselor* (Cleveland, Ohio: Department of Sociology and Anthropology, Western Reserve University, August, 1965), pp. 6-7, esp. Table 3. The general tendency for rehabilitation personnel to stress social sciences, psychology, and education as major subjects in college and graduate school is discussed in *Health Resources Statistics, op. cit.,* Chapter 34.

[5] Margolin, "Trained Trainers are Needed to Prepare Staff for the Rehabilitation Revolution," *op. cit.,* pp. 8-14.

[6] The need to eliminate gaps in pre-service training through in-service training programs is noted in E. R. Sieracki, "Work-Study New Counselor Training Technique," *Rehabilitation Record,* 9 (May-June, 1968), p. 36.

[7] The in-service training program in Virginia is explained in some detail in "In-Service Training Classes Held for Counselors," *The Challenge,* 1 (December, 1967), p. 3.

While many of the rehabilitation personnel have taken in-service courses in rehabilitation counseling or in related fields, relatively few reported that they have taken enough such course work to receive a degree since getting into rehabilitation work.[8] Five percent of the DVR counselors, 20 percent of the DVR supervisors, 8 percent of the CVH counselors, and both of the CVH supervisors said that they have taken enough courses since becoming involved in rehabilitation work to receive a degree.

Most of those who said that they have taken in-service courses also said that the knowledge gained in the classroom has been of at least some value in practical, day-to-day counseling. Hardly any of those taking the courses said that the knowledge gained has been of no practical value. Furthermore, few (only 4 percent of the DVR counselors and none of the other personnel) said that the courses have been of "very little" help in their day-to-day work. The CVH personnel found this coursework to be more helpful than the DVR personnel. Overall, the largest proportion of those who have taken courses in each group of personnel said that the knowledge gained has helped a lot, *but* that more has been learned on the job.

When asked to suggest changes which would make classroom training more helpful, most of those who answered emphasized that these courses should concentrate more on practical knowledge. Very few of either the DVR or CVH personnel suggested other changes in the courses.

The above pattern applies also to the distribution of answers given by the different groups of DVR counselors and supervisors. The largest proportion of each group of DVR personnel suggesting changes said that these courses should concentrate more on practical knowledge.[9]

The final point to be considered in this discussion of in-service education courses concerns the incentives for doing such coursework. The major incentive for each group of personnel seems to be the fact that the agency will pay the expenses for doing such coursework. This was mentioned as an incentive for taking courses by 69 percent of the DVR counselors, 41 percent of the DVR supervisors, 85 percent of the CVH counselors, and both of the CVH supervisors. The other two most important incentives were the opportunity to get a better salary and the chance for a better position. Interestingly, relatively few of the personnel mentioned professional growth and development, interest in the subject and/or a desire to gain knowledge, meeting high standards, and personal satisfaction in gaining new insight into vocational rehabilitation work as incentives for furthering one's education.

This general distribution of incentives applies to each of the separate groups of DVR counselors and supervisors except the DVR central office supervisors. The latter group mentioned as an incentive for taking courses the personal satisfaction in gaining new insight much more than any other group of personnel. Also, a relatively small proportion of DVR central supervisors said that the payment of expenses by the agency is an incentive for taking courses.

In short, then, many of Virginia's rehabilitation personnel have taken courses in rehabilitation counseling or in related fields since getting into this State's rehabilitation program, but relatively few have done enough such work to earn degrees. Most of those taking courses have found them useful, but there is obviously room for improvement in this training, mainly in the direction of making the courses concentrate more on practical knowledge. Finally, the major incentives for taking these courses are the payment of expenses by the State, the chance for a better salary, and the opportunity to get a better position. Closely related to these incentives, particularly the first one mentioned, is the fact that most of the personnel are encouraged by their superiors or by the State agency to take such courses.

In addition to taking individual courses in rehabilitation counseling or in related fields, Virginia's rehabilitation personnel have the opportunity to take part in full-scale in-service training programs. Most of the people working in this State's vocational rehabilitation program have participated in these programs. Over 90 percent of the DVR supervisors, the CVH counselors, and the CVH supervisors reported that they have participated in in-service training programs, and over 80 percent (82 percent) of the DVR counselors gave such a response.

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[8] This, of course, can be misleading in that many may take courses and benefit from them without following a set course toward a degree. In fact, many may take courses with no intention of working for a higher degree.

[9] For discussion of this point, see Martin Dishart, ***Vital Issues and Recommendations From the 1965 National Institute for Rehabilitation Research,*** (Washington: National Rehabilitation Association, 1965), pp. 28-29; and Edgar Schiller and Norman Fertig, "Counselor Preparation —A Cry for Realism," *Rehabilitation in Asia* (October, 1964), pp. 1-4.

With one exception, over 90 percent of each of the different groups of DVR counselors and supervisors said that they have taken part in such training programs. The DVR field counselors had the lowest proportion saying that they had participated in in-service training programs, but even they had over three-fourths (76 percent) saying that they had been involved in these programs.

When asked if they thought that the in-service training programs in which they participated have been helpful, most of the personnel answered affirmatively. The general conclusion of those personnel who have participated in rehabilitation in-service training programs in Virginia seems to be that these programs have been helpful in their day-to-day jobs.

The generally favorable reaction to rehabilitation in-service training programs by Virginia's vocational rehabilitation personnel is further indicated by the fact that a majority of each group of rehabilitation workers said that they favored increasing and expanding those programs. In the aggregate, DVR counselors were less in favor of this idea than the other groups of personnel; however, over two-thirds (71 percent) of these workers indicated their support for increasing and expanding such programs.

A majority of each group of DVR counselors and supervisors also said that they favored providing more in-service training programs. (The proportions favoring this idea ranged from a low of 63 percent of the mental and correctional counselors to a high of 92 percent of the central supervisors.)

In light of this general support for in-service training programs it is not surprising that over three-fourths of the rehabilitation personnel in Virginia answered affirmatively when they were asked the following question: "Do you think that counselors should be given more time to take part in in-service training programs?"

As might be expected, most of the rehabilitation supervisors in Virginia said that they should also have more time for participating in in-service training programs.

When asked to name the training programs which have been most helpful, Virginia's rehabilitation personnel gave a wide variety of answers. The DVR field counselors thought the counselor orientation and medically-oriented programs had helped them the most. The DVR school unit counselors emphasized the intra-agency programs such as the monthly training sessions and the staff meetings at the State level. But, they also mentioned counselors orientation, on-the-job training, and psychiatric training courses. The DVR mental and correctional unit counselors thought intra-agency and psychiatric programs helped them most. They were the only groups mentioning intra-agency programs as helpful. Also, differing from the unit and school counselors, few of them found the counselor orientation program most helpful. (The reason for this may be that they have not had an opportunity to attend these sessions.) Three-fourths of the replies of the DVR supervisors were related to management and supervision courses.

Finally, with respect to in-service training programs, we asked the rehabilitation personnel to tell us what other training programs they felt should be provided. The DVR counselors who had an idea on this point most frequently mentioned programs dealing with specific skills in general.[10] A number (23 percent) also said that the most needed training programs are those related to the worker's particular position in the agency in general.[11] The DVR supervisors mentioned both of these general types of programs as first responses equally.

The DVR personnel also frequently suggested the addition of programs dealing with specific skills in general. The other programs suggested by CVH personnel related to the worker's particular position in the agency in general.

Another important aspect of in-service training is related to the participation of rehabilitation personnel in professional conferences and seminars. Obviously, such participation can be a highly valuable educational experience.

A majority of the DVR and CVH counselors said that they have attended conferences and/or seminars since getting into this State's rehabilitation program. Most of those counselors who have attended conferences or seminars said that they think these meetings have been helpful in their jobs. Eighty-eight percent of the DVR counselors who reported such attendance and all of the CVH counselors who attended such meetings said that they have benefited from this participation.

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[10] This general category includes programs dealing with the following specific skills: testing, psychological testing, job placement, job development, job analysis, working with special disability groups, casework procedure, general medical aspects of vocational rehabilitation work, etc.

[11] This general category includes training programs dealing with courses in rehabilitation centers, courses in school units, courses in the application of policy to actual cases in general, courses in the correction of inmates, courses in role definition and the teamwork approach, and courses in management and supervision.

In Summary: The record is relatively bright as far as general in-service training in Virginia's rehabilitation program is concerned. Most of the vocational rehabilitation workers have taken courses and participated in in-service training programs, and most of the counselors have attended conferences or seminars. Furthermore, a large majority of those taking part in each of these types of training activity reported that they have found this training to be useful. And, the State agency and the supervisors encourage participation in such training programs.

However, before too rosy a picture is drawn, it should be noted that there is obviously room for improvement as far as in-service training in Virginia is concerned. For example, many workers said that they have not taken part in many (or any) of the training programs, courses, or conferences. Furthermore, many of those who have taken part argued that there should be more time for participation in these programs. Also, changes in and additions to the existing programs were suggested.

Recommendation (Immediate 24): Upgrade the current DVR position of training supervisor to director of training and develop a more comprehensive training program.

Recommendation (Interim 40): Define specific times for counselors and supervisors to participate in in-service training programs.

Recommendation (Interim 36): Further study of training programs and Vocational Rehabilitation curricula is needed to facilitate development of adequate programs at colleges and universities in Virginia.

Recommendation (Interim 39): Develop an in-service curriculum which emphasizes more practical training (knowledge).

Recommendation (Interim 37): Give special emphasis to developing in-service training programs for agency supervisors.

Recommendation (Interim 41): Provide professional personnel (counselors, supervisors, etc.) more time for professional development.

Recommendation (Interim 44): Recruit and train supervisors from outside the program or from counselors showing a marked aptitude for executive positions.

Recommendation (Long Range 12): Expand recruitment and training of supervisors through in-service programs for executives sponsored by DVR.

Views on Specialization. There has been some controversy about the desirability of training rehabilitation personnel to be specialists. In order to find out about the opinions of Virginia's rehabilitation personnel on this point, we asked them to tell us whether or not they favor such specialization. A majority of the personnel interviewed said that specialization is a good idea.

It should be emphasized that time for professional development in one's specialty is an important factor in the recruitment and retention of counselors. Nevertheless, a small amount of time is now devoted to this activity. Counselors report that it ranks eighth among eleven activities. (Paperwork is first; interviewing referrals is second; office counseling is third; traveling is fourth; case finding is fifth; placement is sixth; home counseling is seventh.) Training counselor aides is needed to utilize the professional's time more efficiently in helping clients and in developing professionally.

Recommendation (Interim 38): Consider increased counselor specialization as program grows.

Recommendation (Interim 6): Establish the position category of "Counselor Aide."

Recommendation (Interim 7): Employ and train counselor aides to reduce the amount of paperwork for the counselor. Counselor aides could assume some of the preliminary counseling work which is not of a professional nature but beyond that associated with the present duties of clerk-stenographers.

Recommendation (Long Range 4): Increase the number of counselor aides.

Recommendation (Immediate 25): Develop a master plan for the training of DVR personnel.

Agency Reorganization

CVH. As the program of the Virginia Commission for the Visually Handicapped gradually has grown, the organization has not developed accordingly.

During the period of this study, CVH was developing plans for significant agency reorganization. Clearly this is needed and it must be on a continuing basis for some period to facilitate the most functional arrangement for its personnel.

Recommendation (Immediate 21): Implement agency reorganization for CVH.

Recommendation (Interim 23): Establish the position of "District Supervisor" to coordinate services for the blind and visually handicapped.

Recommendation (Interim 24): Establish new district (area) office for CVH at the most advantageous location in the three DVR areas not currently represented.

DVR. Currently, the duties attached to several positions of DVR are unclear. A job classification and specification study will be necessary to correct this problem. During the study for developing the "State-wide" comprehensive plan, it became evident that more time and elaboration was necessary before enough evidence for adequate position analysis would be developed.

Recommendation (Soon 16): Apply for a grant to finance a study of DVR intra-agency position analysis and specification: objectives of this study being: (1) to specify level and type of training for each position and (2) to develop additional "steps" in promotion process (to take into account training, experience, and agency needs).

Several new positions also will have to be created or significantly restructured in order to administer new programs recommended in the comprehensive plan.

Recommendation (Immediate 23): Create the post of "Director of Community Rehabilitation Facilities.".

Recommendation (Interim 22): Create seven posts of "Area Coordinator of Rehabilitation Facilities," one for each of the seven DVR administrative areas of the state.

Recommendation (Interim 28): Create post of "Director of Related Programs."

General

Several recommendations seem obvious and relate to the administration of the vocational rehabilitation programs generally. Testimony of physicians, professional vocational rehabilitation personnel, clients, and the public support these recommendations.

Recommendation (Immediate 7): Develop a clinic situation where counselor, client, and physician can cooperate more closely and shorten the period of time between the physician's initial contact with a VR client and his serving the client.

Recommendation (Immediate 28): Simplify eligibility requirements and approval procedure by the counselor for carrying out of treatment for clients.

Special Planning: Architectural Barriers

The following summary presents the views of the Task Forces on Legislation and Financing which considered the problem of architectural barriers in Virginia.

Architectural barriers result from construction of office and similar buildings in such a manner, including provisions for parking, as to effectively prohibit their use by many of the more seriously handicapped individuals who might otherwise have occasion to use them, as employees, customers, or clients of the employing units occupying said buildings.

Thirty-two states have enacted legislation establishing standards in their respective building codes, whereby provision is made for ramps, elevators, and doorways which will accommodate a normal-width wheelchair, toilet facilities designed for use by handicapped persons, etc. Legislation, therefore, is pending in fourteen states; Executive Orders of Governors relating to the elimination of such barriers are in effect in three states, while joint resolutions of the legislative houses supportive of such elimination have passed in three states, including the 1966 session of the *Virginia* General Assembly. Some of the fourteen states where legislation is pending have extant such an executive order and/or joint resolution. Three states have furnished no information on the point.

According to two Northern Virginia architects, the cost would be negligible in relation to the overall project cost, should the plans and specifications of new buildings have such features incorporated in them. Buildings already constructed present quite another problem, as one can imagine; but some states have enacted, and others are considering the enactment of, legislation designed to force renovation in existing public buildings to meet standards designed to enable physically handicapped persons to use them.

Legislation is needed which will require that:

1. Plans for new buildings to be used by the public provide accomodations for the handicapped (including the blind and deaf),

2. Plans to renovate already existing public buildings include all feasible provisions for use by and safety of the handicapped, and

3. Minimum standards for use by and safety of the handicapped *must* be met by all public buildings —even if renovation is required.

Recommendation (Action 8): Seek legislation to (1) require plans for new public buildings to include accommodations for the handicapped (including the blind and deaf); (2) require renovation of existing public buildings to include all feasible provision for the use by and safety of the handicapped, and (3) require minimum standards in all public buildings—even if renovation is required—to allow for use by handicapped.

Special Planning: Workmen's Compensation and the Industrial Commission

An effective vocational rehabilitation program requires positive attitudes among various groups of employers relating to the employment of handicapped workers. Despite numerous studies attesting to the relatively high performance of handicapped workers who are properly trained and placed,[1] employer resistance toward the hiring of handicapped workers has remained at a level which is so appreciably high as to impair the effectiveness of rehabilitation programs.[2]

Given the nature of hiring practices in most firms (that is, the relatively decentralized process through which hiring is carried out, particularly in larger firms), the development of receptive employer attitudes toward the hiring of disabled workers requires not only the establishment of "educational" programs which are designed to promote greater understanding and awareness of the necessity for equality of opportunity on the part of employers. It also requires the determination of specific legislation which will facilitate "open" hiring practices. In terms of the latter, one of the reasons often given by employers for not hiring persons with physical disabilities is the possible increase in workmen's compensation insurance costs which might result.[3]

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[1] A Bureau of Labor Statistics study of 109 plants employing impaired workers, for example, found physically handicapped workers to be as efficient as able-bodied workers. While their absenteeism rates were about 12 percent higher, handicapped workers had frequency injury rates identical to and disabling injury frequency rates slightly lower than other workers. A recent study at du Pont provided the following assessment of handicapped workers' performance as compared to plant averages:

	Average	*Better*	*Worse*
Safety record	59%	39%	2%
Attendance	50%	36%	14%
Job Performance	60%	27%	13%

Source: A. N. Wecksler, "Handicapped Employees—Real Worker Assets," quoted in Ronald W. Conley, *The Economics of Vocational Rehabilitation* (Baltimore: Johns Hopkins Press, 1965) p. 127. Similar findings were reported by the Employer Subcommittee of the President's Committee on Employment of the Physically Handicapped in its 1956 survey. An average of over 90 percent of the handicapped workers were rated as either equal to or better than other employees along a range of factors including attendance, adjustment, trainability, accidents, lost time, adherence to rules, absenteeism, turnover, and productivity.

[2] It is difficult, of course to measure with accuracy employer resistance against the hiring of handicapped workers. Operational hiring policy may, in fact, exclude disabled workers, but there it little likelihood of the company either acknowledging or having formal policy to this effect. As a general indication of this resistance, however, a New York study revealed that 63 percent of all firms interviewed with 500 or more employees and 78 percent of all firms with 200-499 employees had not knowingly hired disabled workers during the year preceding the study. Source: *Survey of Employer's Practices and Policies in the Hiring of Physically Impaired Workers,* (New York: Federation Employment and Guidance Service, 1959), p. 22.

[3] The fear of increased workmen's compensation costs is not as important a factor in employer resistance toward hiring the disabled worker as are such factors as the alleged inability of these persons to perform certain jobs adequately or the opinion that certain work is too dangerous for them. The New York study, for example, stated that "Less than one personnel officer in ten gives workmen's compensation costs as a factor that influenced him against the hiring of the impaired." (*Survey of Employer's Practices and Policies in the Hiring of Physically Impaired Workers, op. cit.,* p. 66).

It is important to recognize that fears about workmen's compensation costs are, for three out of four employers in the United States, unfounded. The only employers whose rates are subject to increase because of this factor are those whose annual workmen's compensation insurance premiums are sufficient to qualify them for experience rating. For these employers, about one in four of the total in the United States, the "spread the risk" computation rates by which their premiums are figured lessen considerably the impact of extra workmen's compensation benefits for their disabled workers. Since experience rated firms employ the large majority of workers in the United States, however, their attitudes relating to possible increases in workmen's compensation costs must be recognized. In a number of studies involving firms in states which have attempted to alleviate

As one concrete, albeit limited, step toward the alleviation of employer reluctance in hiring handicapped persons, all but four states (Nevada, Georgia, Louisiana, and Virginia) have provided legislation which sets up a subsequent or second-injury fund. This type of fund operates to minimize any increase in workmen's compensation insurance for those employers who do hire persons with physical disabilities. This report will discuss the role, coverage, liability allocations, financing, and publicizing of these funds.

The second-injury fund is a special fund set up within the workmen's compensation system "to ensure that a handicapped worker who suffers a subsequent injury on the job will receive full compensation to cover the resultant disability, at the same time ensuring that the employer need pay only the benefits that are due for the subsequent injury."[4] In effect the fund pays the difference between what the worker receives from his last employer (that is, the employer under whom he suffers the subsequent disability) and what he is entitled to receive for his resulting condition which is caused by the combined injuries.

The role of the second injury fund, then, is twofold. First, it encourages the employment of the handicapped by limiting the liability of the employer to the second or subsequent injury suffered by an employee with a prior disability. Second, the second injury fund fully protects the employee, since the fund pays the difference between what the employee receives from the employer and what the employee would have received if he had not had a prior disability.

While the purpose of the second injury fund is clear, its effects have varied from state to state. In terms of effectiveness, there are a number of critical variables which must be recognized in second injury fund legislation and application. Among the most important, if not the most important, of these relates to coverage. Laws in many states are so restrictive in coverage as to render the second injury fund virtually useless.

In terms of the second injury fund concept, coverage refers specifically to the types of prior and subsequent disabilities which afford an employer relief from total liability in cases of second or subsequent injuries. The coverage within different states varies widely with relation to both cause and type of prior disability. Only sixteen jurisdictions, for example, have provided coverage for all pre-existing permanent impairments regardless of type or cause as of 1967. In a majority of states, however, coverage is limited with regard to both type and cause. In many states, the type of disability covered is restricted to amputations and sight losses (loss, or loss of use, of a hand, leg, foot, or eye). Similarly some states, such as North Dakota, restrict cause to "injury incurred in course of different employment." The effect of such restrictions, upon either type or cause, is to diminish substantially the effectiveness of a second-injury fund, since a large percentage of physically disabled persons are not afforded protection. Amputees and sight losses account for only about one-seventh of the handicaps for person seeking VR services throughout the nation. It is quite clear that broad coverage in terms of second-injury fund is necessary if that fund is to offer the type of protection which is warranted by the incidence of disability within a given area. As for restrictions as to cause of prior employment, similar deficiencies exist in narrow coverage. Many persons, especially among younger age groups, have disabilities which are not incurred through previous employ-

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this problem through second-injury funds, it is clear that establishment of the fund in and of itself is not enough. In the New York study, it was found that "The Second-Injury Law is unknown to about three-quarters of the respondents. Of the 25 percent who reported knowledge of the law, half said they did not know if it had influenced them, and half expressed the opinion that it had induced them to hire more impaired workers." (Source: *Survey of Employer's Practices and Policies in the Hiring of Physically Impaired Workers, op. cit.*, p. 66). Similar studies in Iowa and New Jersey led to parallel findings. In New Jersey, for example, it was stated that "at most twelve percent of all the respondents interrogated may have been influenced to some extent by the second injury fund law to hire the handicapped." (Source: "Report of the Subcommittee on Subsequent Injury Funds," in *Research Conference on Workmen's Compensation and Vocational Rehabilitation*, ed. A. J. Jaffe (New York: Bureau of Applied Social Research, Columbia University, 1961), pp. 47-56.

[4] *U.S. Department of Labor Bulletin 212* (Revised, 1967), p. 22. It might be noted here that the emergence of the second injury fund as an integral feature of state workmen's compensation laws did not occur until the 1940's. New York enacted the first second injury fund in 1916 which, while severely limited in scope, provided the first workable solution for reconciling the interests of employers and handicapped persons. Although this system provided full benefits to handicapped workers without imposing additional liability upon their employers, few states adopted it. By 1940, for example, only thirteen states had second injury funds in operation. The problem of providing rehabilitation and readjustment for thousands of disabled World War II veterans, however, led thirty-four jurisdictions to establish funds during the war. In the ensuing period, all but four of the remaining states have enacted similar legislation.

ment.[5] To deny them protection under the second-injury fund is to place a severe and concurrent limitation upon the vocational rehabilitation program in a state.

In terms of coverage, then, it is clear that there should be no restriction as to either type (such as heart disease, epilepsy, back injury, or occupational disease) or cause (such as accident, disease, congenital origin, or military action) of previous permanent disability.

Within a comprehensive and effective second-injury fund system, the problems relating to coverage of prior disabilities in terms of type and cause are interrelated. The relationship extends equally to subsequent or second injuries covered by the fund. In most states, particularly those with narrow coverage, coverage relating to second or subsequent injury is also narrow, usually being restricted to loss of another member or eye. Few states with narrow coverage of prior disability do not place any limitation on the subsequent disability covered.[6] In addition, most states limit subsequent injury coverage to cases where the prior and subsequent injuries have a specified combined effect. Thirty-two jurisdictions, for example, limit application of the second-injury fund to injuries which together with the prior disability result in permanent total disability. These restrictions are found in nearly half the states having broad coverage of prior disability.

The effect of this kind of restriction on subsequent injury is again to reduce substantially the intended effect of the second-injury fund, since "it is estimated that less than one-tenth of 1 percent of all occupational accidents result in permanent total disability."[7] Modification of requirements of permanent total disability are being met in two ways.

Some states (California, North Dakota, Ohio, Pennsylvania, Wisconsin) modify permanent total disability as the combined effect of first and second injuries; a greater number (Florida, Kentucky, New Mexico, New York, Oklahoma, South Carolina, Utah) substitute a rule that damage caused by the first disability must be greater than that which would have been the result of the second injury considered by itself.

In terms of coverage, then, the second injury fund must be able to provide protection for a broad range of disabilities, both prior and subsequent.

It is equally clear, however, that operation of the fund should be limited to prior disabilities which are fairly significant. There must be some definition of the extent of prior disability necessary before the employer's responsibility is shifted to the fund. In the states with narrow coverage (that is, states where the second injury fund applies to prior disabilities such as amputations or sight losses), the problem of extent of disability does not arise, since those injuries which are covered are by their very nature serious or significant disabilities. In the case of states with broad coverage, however, problems have arisen when there was no legislative recognition of "extent of disability" as a qualification for second injury fund coverage. In some cases, notably that of California in the period from 1949-1955, the lack of an extent of disability definition combined with coverage of any permanent partial disability led to claims against the fund by employers and insurance carriers in cases where an employee's pre-existing condition was "merely a latent, asymptomatic and non-disabling pathology."[8] New York, which has broad coverage provisions relating to type and cause of prior disability, has approached the extent of disability problem in the following manner:

> In order to qualify for special disability fund benefits, the following requirements must be met:
>
> First, the current occupational injury or disease must result in some degree of *permanent* disability requiring payment of compensation in excess of 104 weeks.
>
> Second, the following questions must be answered affirmatively; (1) Did the employee have a permanent physical impairment prior to the current permanent occupational injury or disease? (2) If so, did the employer have knowledge of the permanent impairment before the current injury or disease?
>
> (3) If so, was such permanent physical impairment an obstacle to employment to the extent that (a) it limited the types of employment open to the employee and/or (b) it necessitated job placement and/or work performance standards which took into consideration the impairment.

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[5] Here, again, the paucity of reliable data for Virginia places a severe handicap on supporting data for this type of proposition. From the scattered and often unrelated data which are available, however, there appears to be a substantial number of VR clients in Virginia whose handicaps were not incurred through prior employment.

[6] These states are New Hampshire, Oklahoma, and Wyoming.

[7] *U.S. Department of Labor Bulletin 234* (1961), p. 52.

[8] *Partial Report Relating to Workmen's Compensation by (California) Senate Committee on Labor* (1955), p. 42, quoted in *U.S. Department of Labor Bulletin 190* (1957).

Third, the aggregate permanent disability resulting from the accident and the pre-existing disability must be substantially greater than that which would have resulted from the current injury or disease alone. Fourth, if death results, it must be shown that there was an association between the permanent physical impairment and the injury and death—a permanent physical impairment of a kind without which the injury or death would not have occurred. The burden of proof in all such cases is upon the employer or the insurance carrier.[9] (Permanent physical impairment is defined by law to mean "any permanent condition due to a previous accident or disease, or any congenital condition, which is or is likely to be a hindrance or obstacle to employment.")

Under the New York law, therefore, the New York Compensation Board (supported by the courts: see *Zyla* v *A. D. Juillard and Company,* 277 App. Div. 604 and *Souers* v *Town of Blenheim,* 278 App. Div. 1030), requires not only that employers have knowledge of the handicap, but also, in the case of a latent or obscure pathological condition, that they have acted in some way on this knowledge. The New York example has been followed rather closely in the Florida and Minnesota second injury fund laws relating to extent of disability. In Wisconsin, prior disabilities are covered only if, occurring in employment, they would entitle a worker to at least 250 weeks of benefits. And Ohio's second injury fund legislation provides that any employer who advises the Ohio Industrial Commission that he has employed a handicap worker is entitled, in case that employee is injured, to a determination of the amount of disability (or proportion of cost of death awards) which is attributable to the employee's pre-existing condition. In such a case the amount fixed by the Industrial Commission is charged to the second injury fund. Even in cases where specific notice is not given, however, second injury benefits can also be charged against the fund if the Industrial Commission finds that it can determine the extent of prior disability in apportioning liability between the employer and the second injury fund.

Numerous examples exist, then, of legislative requirements dealing with extent of disability, and it would appear that this is necessary if unwarranted claims against a second injury fund are to be prevented.

There are four general methods for financing a second injury fund. Most states levy a tax or assessment on employers and insurers. A few states, such as California and Pennsylvania, use state appropriations. Kansas and Wyoming use both the employer assessment and state appropriations. And, in Oklahoma, the fund is supported through direct employer and employee contributions.

Twenty jurisdictions levying an assessment against employers base their assessments upon "No dependency death cases." Four of these states combine this type of assessment with employer payments in certain permanent partial disability cases. Three of these states combine the death assessments with annual assessments against insurance carriers. Six states rely entirely upon the employer payments in all death cases (most use flat rates per death). Wisconsin levies a flat assessment of $1,500 in each loss case involving a member or eye.

Other plans base the assessment against employers on a percentage of the total compensation awards paid by the employer during the preceding year. A variation of this involves an assessment measured as a percentage of the premiums paid to insurance carriers or premiums that hypothetically would have been required of self-insurers.

Finally, six states support the fund entirely from state workmen's compensation insurance funds, the income of which can ordinarily be considered as consisting of premiums paid by covered employers.

Reliance upon a death assessment basis is used sparingly. Since less than 1 percent of all job-caused injuries result in death,[10] the second injury funds which rely in great part upon these assessments are actuarially unsound (indeed, this type of funding in Hawaii led to actuarial bankruptcy). This encourages, or perhaps forces, fund administrators to discourage payments against the fund. Since the easiest manner in which this can be done is to refrain from publicizing the fund to any great extent, its basic purpose is defeated.

As far as financing the second injury fund is concerned, therefore, there are essentially four sound bases. First, there is the annual assessment against employers and/or insurers. Second, there are state appropriations. Third, there is the allocation from the state workmen's compensation insurance fund (this can obviously only be used in states with exclusive state insurance funds). Fourth, there is the New York plan which operates through prorating annual assessments against insurers on the basis of actual expenditures.

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[9] W. J. Maxwell, "The Second Injury Laws," *Insurance Law Journal,* (May, 1959), p. 306.

[10] *U.S. Department of Labor Bulletin 234* (1961), p. 57.

As this report has attempted to make clear, previous studies have indicated that the second injury fund has had, in many cases, only limited effectiveness. In many cases, this is the result of restrictive coverage. In others, inadequate financing substantially diminishes any real effect which the second injury fund might have. To some extent, however, even with broad coverage and adequate financing, as is the case in New York which, in many respects, has a model second-injury fund law, the existence of a second injury fund in and of itself does little to encourage employers to hire the handicapped person. It is apparent, for example, that most employers do not feel that workmen's compensation costs are a major factor mitigating against their hiring of the handicapped. Thus, the establishment of a second injury fund within a jurisdiction will not have the effect of breaking down the major factor in employer resistance toward the hiring of the handicapped. What previous studies do indicate, however, is that there is some likelihood that familiarity with the second injury fund may encourage some incremental hiring of handicapped applicants by some employers.

In this context, the necessity for publicizing the second-injury fund law becomes apparent. If there is any intended effect for the fund, that effect can only be realized if those with whom it is most concerned —the employers—are aware of it. Thus, the establishment of a second-injury fund must of necessity be accompanied by a concurrent attempt to inform employers within a jurisdiction of the protection which it affords them in hiring disabled applicants.

As part of the entire vocational rehabilitation program, however, the establishment of second-injury protection for employers is most propitious within a climate of fairly informed employer attitudes toward hiring the handicapped in the first place. If employers are reluctant to hire handicapped persons because of job and non-job factors apart from compensation liabilities, the effect of second-injury funds will be severely limited. Therefore, this type of program must be viewed as only a part, albeit an integral one, of a comprehensive educational program connected with vocational rehabilitation.

Virginia Workmen's Compensation Laws and Nationally Recommended Standards

1.	Provision:	Compulsory and elective laws	*Virginia:* Compulsory
	Standard:	The workmen's compensation law should be compulsory	
2.	Provision:	Numerical exemptions	*Virginia:* Law exempts employer of less than a stipulated number of employees
	Standard:	No exemption of employees based on number of employees	
3.	Provision:	Coverage of agricultural workers	*Virginia:* Selected agricultural employment covered
	Standard:	Coverage of agricultural workers in the same manner as other employees	
4.	Provision:	Occupational disease coverage	*Virginia:* Full coverage
	Standard:	Full coverage of occupational disease	

5.	PROVISION:	Rehabilitation division within the workmen's compensation agency	*Virginia:* None
	STANDARD:	A rehabilitation division within the workmen's compensation agency	
6.	PROVISION:	Maintenance benefits during rehabilitation	*Virginia:* No specific law
	STANDARD:	Provision of special maintenance benefits during the period of rehabilitation	
7.	PROVISION:	Medical benefits for accidental injury	*Virginia:* Limited benefits
	STANDARD:	Full medical benefits for accidents	
8.	PROVISION:	Medical benefits for occupational diseases	*Virginia:* Limited benefits
	STANDARD:	Full medical benefit for occupational diseases	
9.	PROVISION:	Supervision of medical care	*Virginia:* Workmen's compensation agency has authority to supervise medical care
	STANDARD:	Supervision of medical care by the workmen's compensation agency	
10.	PROVISION:	Selection of physician	*Virginia:* Initial choice of physician by employer or insurance carrier
	STANDARD:	Initial selection of physician by the injured worker	
11.	PROVISION:	Coverage under second-or subsequent-injury funds	*Virginia:* No fund
	STANDARD:	Broad coverage under second-or subsequent-injury fund	
12.	PROVISION:	Time limit for filing occupational disease claim	*Virginia:* Flexible period for filing claim
	STANDARD:	The time limitation for filing claims should be at least one year after the date when the employee has knowledge of the nature of his disability and its relation to his job and until after disablement	*Virginia:* Flexible period for filing claim

13.	**Provision:**	Waiting Period	*Virginia:* Waiting period in excess of 3 days or retroactive benefit longer than 2 weeks
	Standard:	A waiting period of not more then 3 days with retroactive benefits after 2 weeks or less	
14.	**Provision:**	Death benefits—maximum period	*Virginia:* Limited to specific period or amount
	Standard:	Benefits to widow during widowhood	
15.	**Provision:**	Benefits for permanent total disability—maximum period	*Virginia:* Limited to specific period or amount
	Standard:	Benefits for permanent total disability for life or period of disability	
16.	**Provision:**	Ratio of maximum weekly benefit for temporary total disability to average weekly wages	*Virginia:* Less than 50%
	Standard:	Maximum weekly benefit should be equal to at least 66⅔% of the state's average weekly wage	

In a meeting of the Governor's Study Commission on Vocational Rehabilitation held on December 19, 1967 at the John Marshall Hotel in Richmond, Virginia, the following recommendations were formulated and adopted by the Commission for presentation to Governor Mills E. Godwin, Jr., for his consideration:

1. That the Virginia Advisory Legislative Council currently studying the whole realm of Workmen's Compensation in Virginia be asked to include in their study the advisability of establishing a "Second-Injury Fund" under the Workmen's Compensation Laws; and, that it is the concensus of this Commission that the establishment of a workable "Second-Injury Fund" is desirable.

2. That this Commission maintain close liaison with the Virginia Chapter of the American Institute of Architects (AIA) who is currently studying the specifications of the American Standards Association (ASA) to determine the cost and feasibility of incorporating the specifications, or some modifications of the ASA, into future public buildings in Virginia; and that this Commission maintain close liaison with the Division of Engineering and Buildings in seeking counsel and guidance in proposing legislation containing provisions requiring that future public buildings in Virginia be free from architectural barriers and accessible to handicapped persons.

3. That a vocational rehabilitation counselor and secretary be employed and stationed in an office of the Industrial Commission for the purpose of screening all industrial accidents for potential rehabilitation services and that the Industrial Commission reimburse the Department of Vocational Rehabilitation for these services.

4. That the Department of Vocational Rehabilitation maintain an accurate record of expenditures incurred in the rehabilitation of each client referred to the Department from the Industrial Commission files and that the Department be reimbursed for such expenditures from funds of the Industrial Commission. This reimbursement would be in lieu of the

$20,000 that is now annually transferred from funds of the Industrial Commission to the Department.

5. That the $1,000 restriction on the expenditure of an initial prosthetic device be removed and that the law be amended to permit the Industrial Commission to authorize the expenditure of funds necessary to give training in the proper use of prosthetic devices; and, that the Industrial Commission be authorized to award funds to purchase prosthetic devices in addition to the initial prosthetic device; and, that the period during which an injured worker may receive medical services which are accident-connected be extended to a more realistic length of time.

The final action on these recommendations by the 1968 Virginia General Assembly was to delete the $20,000 which the Industrial Commission has been required to pay annually, after fiscal year 1969.

Recommendation (Action 3): Legislation, within the framework of the Virginia Workmen's Compensation Act, to create a second-injury fund to be financed by appropriate increases in contributions should be passed and VR should be included for medical expenses in appropriate cases.

Recommendation (Action 10): Require the State Industrial Commission to reimburse DVR for expenses incurred in the rehabilitation of clients referred from the Industrial Commission.

Recommendation (Action 6): Remove the $1,000 restriction on expenditures for an initial prosthetic device in order to permit the Industrial Commission to authorize the expenditure of funds as necessary to provide training in the use of prosthetic devices.

Recommendation (Action 4): Extend the period of time during which an injured worker may receive medical services which are accident-connected.

However, the Virginia Advisory Legislative Council has anticipated the next recommendation by initiating a study of the situation.

Recommendation (Action 2): Request the Virginia Advisory Legislative Council to study the advisability of establishing a "second-injury fund" under the Workmen's Compensation Law.

The Department of Vocational Rehabilitation has implemented the following recommendation relating to this general problem.

Recommendation (Action 11): Station one DVR counselor and one secretary at the Industrial Commission office to screen all industrial accident victims for potential rehabilitation services. Salaries of DVR personnel should be reimbursed by the Industrial Commission.

Chapter V

COMPOSITE WORKING PLAN

In this section, a series of tables show the program levels and costs necessary to meet all needs for rehabilitation services in the State by 1975. It should be recognized that Tables 5.2, 5.3, and 5.4 indicate the total costs and other requirements of meeting all projected needs by 1975 *without* consideration of resources to meet these needs. This immediately distinguishes these costs from the total costs derived from the "Summary of Recommendations."

In dealing with concrete recommendations, current and potential resources—including finances, manpower, and facilities—were necessarily relevant criteria. For example, it is extremely unlikely that sufficient available manpower exists for increasing the professional staff of Virginia's rehabilitation agencies to the levels indicated in Table 5.4 even if the finances necessary to do so were immediately available. The Governor's Study Commission therefore placed a heavy emphasis on the role of related programs to help meet current needs and on training and development programs for counselors and other staff which will allow substantial program expansion in the future.

Total Needs

The total costs of meeting the needs for rehabilitation services by 1975 in Virginia are shown in Table 5.2. Several points should be noted about the methodology and computations utilized in these estimates and projections. First, the needs for services (shown for 1968, 1970, and 1975) are based upon the estimates provided by the community surveys. The numbers shown for each of the years represent persons between the ages 16-64 whose disability results in a severe or moderate major activity limitation. Thus, the estimates are *not* based upon total incidence nor upon the entire population but rather upon that portion of the population whose disability and age are such that there is likely to be a need for rehabilitation services and that rehabilitation will be feasible, at least from the standpoint of age.

Second, the estimated needs shown for 1968, 1970, and 1975 are additive. It is assumed, therefore, that if all persons within a given disability category could be rehabilitated in 1968, population growth alone will result in the subsequent need shown for 1970. This, of course, also applies to the need in 1975 over 1970. Changes in other variables—such as occupational distributions throughout the State, reporting methods, eligibility requirements, feasibility standards, and many other considerations—could affect any or all of these estimates at a given point in time or over a period of time. The estimates shown here, however, reflect only population growth as applied to incidence estimates for 1968.

Third, the average costs for each disability category include case service costs and all other costs, such as administration, guidance and placement, support to facilities, and specific program costs. The average cost for any disability category in 1968, for example, includes the average cost per closed rehabilitated case as reported by the rehabilitation agencies in the State in fiscal year 1968 and an estimate of all related costs per rehabilitated case in fiscal year 1968. The latter figure was obtained by computing the proportion of total case service costs accounted for by closed rehabilitated costs and applying that proportion to all other costs. This was then divided by the total number of closed rehabilitated cases to provide an average cost per rehabilitant for all non-case service costs. The average case service cost per rehabilitant—in a given disability category—and the average non-case service cost per rehabilitant were then combined to give a total average cost within each disability category.

Fourth, an increment of 10 percent over the 1968 figures was used to compute the average costs in 1970, and an increment of 35 percent over the 1968 figures was used to compute the average costs in 1975.

Table 5.3 indicates the effect of these increments when need is allocated equally over an eight-year period. If total needs are met, Table 5.3 represents a more accurate picture of how they might be met and of the total cost involved. When Table 5.2 assumes that all current needs could be met immediately, Table 5.3 assumes that if these needs are met, they are likely to be met over the long-term period indicated. This allocation, however, substantially increases costs, since natural cost increases (discussed above) are calculated. Thus, for example, it will cost almost $25 million more to meet all needs over an eight-year period than it would if all current needs could be met immediately.

State Vocational Rehabilitation Program

Incidence estimates in Table 5.2 relate to feasibility—in terms of age—and need—in terms of major activity limitations. Therefore, the vocational rehabilitation program in Virginia is responsible for meeting this total need. In meeting this need, however, realistic estimates of costs and manpower needs are needed. In Table 5.4 costs and manpower needs have been allocated over the period 1968-1975 so that the total need for rehabilitation services can be met by 1975. The difference between the estimated costs for Table 5.3 and 5.4 approximate 1 percent (Table 5.3 estimates total costs at $193,504,738; Table 5.4 estimates total cost at $190,962,081). The difference results from rounding, particularly within each disability category in Table 5.3, and it is not significant.

Several points about the methodology and computations utilized in Table 5.4 should be noted. First, it is going to be necessary for the State's rehabilitation agencies to reduce the backlog of cases which have been building up in the past, while at the same time keeping pace with the increase of cases occasioned by population growth. Thus, the per year number of rehabilitations shown in Table 5.4 indicate the level of program performance needed to eliminate the backlog and to prevent the growth of a similar backlog over the next eight years. With this in mind, it is unrealistic to assume that costs and manpower needs can be projected without reference to the effect which sufficiently high programs levels will have upon total need within the State. Thus, the projections shown are based upon the assumption that an immediate expansion of the rehabilitation program is possible and that this expansion can be maintained and increased over the eight-year period. Since this table is an estimate of program needs without regard to financial realities, this is a valid assumption.

Second, the total costs indicated in Table 5.4 are higher than those indicated in Table 5.2 but approximate costs shown in Table 5.3. While Table 5.2 estimated total costs for rehabilitations in a given year, its essential purpose was to indicate the total number of persons who need rehabilitation services. In Table 5.4 this total need has been allocated equally over an eight-year period. Costs in future years have been increased by 5 percent per year over the 1968 base costs. This represents a relatively realistic assessment of the natural growth in rehabilitation costs, and it also indicates the extent to which rehabilitation costs will become proportionately greater if substantial program expansion is continually delayed. Thus, for example, if the number of rehabilitations necessary in 1968 do not occur, these rehabilitations must be added to succeeding years at proportionately greater costs.

Facilities Summary

Table 5.5 through 5.8 present a summary of the Workshops and Facilities Planning Study. Table 5.5 shows the number of persons served by existing workshops and facilities during fiscal year 1967. Table 5.6 provides an estimate of the need for given services during 1968.

Because of the nature of existing rehabilitation facilities and workshops throughout the State, specific recommendations on establishment or development of facilities were confined to comprehensive rehabilitation centers and to a rehabilitation adjustment center for the blind. (See Table 5.7) As Table 5.8 indicates, by 1975, the eight rehabilitation centers in the State will be able to serve approximately 10,800 clients per year. Individual facilities, however, have been phased in over a five-year period. It is expected however, that expansion of rehabilitation units operated by the State rehabilitation agency (Department of Vocational Rehabilitation) will continue during this period. The necessity for cooperative agreements does not allow estimates of numbers or costs, since these two factors will depend upon the nature of the cooperative agreements which are developed.

In order to meet total needs by 1975, then, program expansion must be substantial in terms of financial and other resources. The necessity for increased staffing and for the development of additional rehabilitation facilities in order to meet these needs require significant commitments by the State and Federal governments. The estimates provided here, however, do not require unrealistic commitments. They do require that expenditures be increased immediately and that they be increased periodically through 1975 at levels which are substantially above current funding levels.

TABLE 5.1—Cases Rehabilitated by Virginia's Rehabilitation Agencies; Fiscal Year 1968(a)

Visual	430
Hearing	191
Orthopedic (excluding amputation)	1,019
Amputation	200
Mental	1,321
Other(b)	3,627
	6,788

(a) Includes general agency (DVR) and agency for the blind (CVH).

(b) Includes: neoplasms; allergies, endocrine, etc. disorders; blood diseases, etc.; other nervous disorders; heart and circulatory conditions; respiratory diseases; digestive system disorders; genito-urinary system disorders; speech impairments; and other disability conditions not elsewhere classifiable.

TABLE 5.2—Total Projected Need and Cost of Needed Services, by Disability, 1968-75

	Number	*Average cost*	*Total*
1968: Estimated need and cost			
Visual impairments	10,233	1,847	18,900,351
Hearing impairments	4,975	1,035	5,149,125
Orthopedic or functional impairments, except amputation	57,568	1,018	58,604,224
Amputation or absence of major and minor members	1,301	1,184	1,540,384
Mental, personality, and intelligence disorders	10,559	936	9,883,224
Other disability conditions*	51,401	1,010	51,915,010
	136,037		145,992,318
1970: Estimated need and cost			
Visual impairments	394	2,031	800,214
Hearing impairments	192	1,138	218,496
Orthopedic or functional impairments, except amputation	2,212	1,119	2,475,228
Amputation or absence of major and minor members	50	1,302	65,100
Mental, personality, and intelligence disorders	406	1,029	417,774
Other disability conditions*	1,975	1,111	2,194,225
	5,229		6,171,037
1975: Estimated need and cost			
Visual impairments	858	2,493	2,138,994
Hearing impairments	416	1,397	581,152
Orthopedic or functional impairments, except amputation	4,815	1,374	6,615,810
Amputation or absence of major and minor members	110	1,598	175,780
Mental, personality, and intelligence disorders	879	1,263	1,110,177
Other disability conditions*	4,295	1,363	5,854,085
	11,373		16,475,998

* Includes; neoplasms; allergies, endocrine, etc. disorders; blood diseases, etc.; other nervous disorders; heart and circulatory conditions; respiratory diseases; digestive system disorders; genito-urinary system disorders; speech impairments; and other disability conditions not elsewhere classifiable.

TABLE 5.3—Total Projected Need and Costs of Needed Services, by Disability: Per Year Allocation 1968-75

	Number	*Average cost*	*Total*
1968: Estimated need and cost			
Visual impairments	1,436	1,847	2,652,292
Hearing impairments	698	1,035	722,430
Orthopedic or functional impairments, except amputation	8,074	1,018	8,219,332
Amputation or absence of major and minor members	279	1,184	330,336
Mental, personality, and intelligence disorders	1,481	936	1,386,216
Other disability conditions*	7,209	1,010	7,281,090
	19,177		20,591,696
1969: Estimated need and cost			
Visual impairments	1,436	1,939	2,784,404
Hearing impairments	698	1,086	758,028
Orthopedic or functional impairments, except amputation	8,074	1,068	8,623,032
Amputation or absence of major and minor members	279	1,243	346,797
Mental, personality, and intelligence disorders	1,481	982	1,454,342
Other disability conditions*	7,209	1,060	7,641,540
	19,177		21,608,143
1970: Estimated need and cost			
Visual impairments	1,436	2,031	2,916,516
Hearing impairments	698	1,138	794,324
Orthopedic or functional impairments, except amputation	8,074	1,119	9,034,806
Amputation or absence of major and minor members	279	1,302	363,258
Mental, personality, and intelligence disorders	1,481	1,029	1,523,949
Other disability conditions*	7,209	1,111	8,009,199
	19,177		22,642,052
1971: Estimated need and cost			
Visual impairments	1,436	2,124	3,050,064
Hearing impairments	698	1,190	830,620
Orthopedic or functional impairments, except amputation	8,074	1,170	9,446,580
Amputation or absence of major and minor members	279	1,361	379,719
Mental, personality, and intelligence disorders	1,481	1,076	1,593,556
Other disability conditions*	7,209	1,161	8,369,649
	19,177		23,670,188

Table 5.3—(continued)

	Number	*Average cost*	*Total*
1972: Estimated need and cost			
Visual impairments	1,436	2,216	3,182,176
Hearing impairments	698	1,242	866,916
Orthopedic or functional impairments, except amputation	8,074	1,221	9,858,354
Amputation or absence of major and minor members	279	1,420	396,180
Mental, personality, and intelligence disorders	1,481	1,123	1,663,163
Other disability conditions*	7,209	1,212	8,737,308
	19,177		24,704,097
1973: Estimated need and cost			
Visual impairments	1,436	2,308	3,314,288
Hearing impairments	698	1,293	902,514
Orthopedic or functional impairments, except amputation	8,074	1,272	10,270,128
Amputation or absence of major and minor members	279	1,480	412,920
Mental, personality, and intelligence disorders	1,481	1,170	1,732,770
Other disability conditions*	7,209	1,262	9,097,758
	19,177		25,730,378
1974: Estimated need and cost			
Visual impairments	1,436	2,401	3,447,836
Hearing impairments	698	1,345	938,810
Orthopedic or functional impairments, except amputation	8,074	1,323	10,681,902
Amputation or absence of major and minor members	279	1,539	429,381
Mental, personality, and intelligence disorders	1,481	1,216	1,800,896
Other disability conditions*	7,209	1,313	9,465,417
	19,177		26,764,242
1975: Estimated need and cost			
Visual impairments	1,436	2,493	3,579,948
Hearing impairments	698	1,397	975,106
Orthopedic or functional impairments, except amputation	8,074	1,374	11,093,676

Table 5.3—(continued)

	Number	*Average cost*	*Total*
Amputation or absence of major and minor members	279	1,598	445,842
Mental, personality, and intelligence disorders	1,481	1,263	1,870,503
Other disability conditions*	7,209	1,363	9,825,867
	19,177		27,790,942
TOTAL COST			193,504,738

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* Includes: neoplasms; allergies, endocrine, etc. disorders; blood diseases, etc.; other nervous disorders; heart and circulatory conditions; respiratory diseases; digestive system disorders; genito-urinary system disorders; speech impairments; and other disability conditions not elsewhere classifiable.

Table 5.4—Total State Vocational Rehabilitation Program Levels to Meet All Needs

	Number of rehabilitations	*Case service costs*	*Staff*			*Workshop, facility, other service program costs*	*Total cost*
			Prof.	*Other*	*Costs*		
1968	19,080	8,663,550	1120.3	737.1	8,667,408	2,984,158	20,315,116
1969	19,080	9,096,727	1120.3	737.1	9,100,778	3,133,365	21,330,870
1970	19,080	9,529,905	1120.3	737.1	9,534,148	3,282,573	22,346,626
1971	19,080	9,963,082	1120.3	737.1	9,967,519	3,431,781	23,362,382
1972	19,080	10,396,260	1120.3	737.1	10,400,889	3,580,989	24,378,138
1973	19,080	10,829,437	1120.3	737.1	10,834,260	3,730,197	25,393,894
1974	19,080	11,262,615	1120.3	737.1	11,267,630	3,879,405	26,409,650
1975	19,080	11,695,792	1120.3	737.1	11,701,000	4,028,613	27,425,405
		81,437,368			81,473,632	28,051,081	190,962,081

These figures were derived on the same basis as Tables 5.2 and 5.3. The percentage of case service costs, staff cost, and facility costs, as well as the number of staff, accounted for by closed rehabilitated cases *only* was computed. This was approximately 77 percent for the 1968 budget of the two agencies. Each of these totals was multiplied by the ratio of the estimated number of persons needing rehabilitation services to the number actually rehabilitated in 1968. Thus, in 1968, approximately 2.8 times as many persons might have been rehabilitated as were actually rehabilitated. If they were rehabilitated, the staff and cost estimates indicated would have been required.

Table 5.5—Facilities Summary

Category	1967 Number of facilities	Number served
Public		
Workshops	2	102
Comprehensive rehabilitation centers	1	1,472
Rehabilitation facilities	16	4,840
	19	6,414
Private		
Workshops	11	840
Comprehensive rehabilitation centers	0	0
Rehabilitation facilities	5	766
	16	1,606
TOTALS	35	8,020

Table 5.6—Estimated Need for Services, 1968

Type of service or facility	Number of clients
Workshops	21,707
Rehabilitation facility	11,766
Comprehensive rehabilitation center	12,170
	45,643

Table 5.7—Proposed Expansion of Existing Facilities

Category	Present number	Proposed number
Public		
Workshops	2	2
Rehabilitation adjustment center for blind	0	1
Comprehensive rehabilitation centers	1	7
Rehabilitation facilities	16	—(a)

(a) The greater number of public rehabilitation facilities are Department of Vocational Rehabilitation operated under cooperative agreements with schools, hospitals, and correctional institutions. Expansion, therefore, would require cooperative agreements and costs cannot be estimated in advance of such agreements. It is assumed, however, that the expansion of rehabilitation facilities will consist primarily, if not entirely, of the establishment of new units.

Table 5.8—Costs of Proposed New Facilities

	Number	Client service capacity per year	Construction, equipment, all related costs	First year of operation	Operating costs through 1975
Rehabilitation Adjustment Center for the Blind	1	225	$ 2,130,000	1972	$ 1,680,000
Comprehensive Rehabilitation Centers:	6	10,800	62,251,000		36,000,000
1. Norfolk (expansion of Tidewater Rehabilitation Institute)		1,800	7,921,000	1973	9,000,000
2. Alexandria (expansion of National Orthopaedic and Rehabilitation Hospital)		1,800	6,246,000	1973	9,000,000
3. Abingdon (DVR operated—new)		1,800	12,021,000	1973	9,000,000
4. Richmond (DVR operated—new)		1,800	12,021,000	1975	3,000,000
5. South Boston (DVR operated—new)		1,800	12,021,000	1975	3,000,000
6. Roanoke (DVR operated—new)		1,800	12,021,000	1975	3,000,000
TOTALS	7	11,025	$64,381,000		$37,680,000

Chapter VI

PLANNING THE FOLLOW-UP

Introduction

Planning involves a process and must be continual and self-correcting. No single shot planning effort—not even Statewide comprehensive planning—will be fruitful unless it provides for implementation and follow-up evaluation as part of the total plan. No matter how great the public supports vocational rehabilitation in the State, this support cannot be translated directly into public policy to provide effective programs. Statewide and community leadership for the vocational rehabilitation programs must be created to translate public support into public policy and to build continuing support. The vocational rehabilitation programs cannot help clients unless continuing and strenuous efforts are made to disseminate information about the programs at the grassroots in the local communities throughout the State.

Information and Attitudes

Surveys of public attitudes in five diverse Virginia communities were part of the studies conducted for Statewide comprehensive planning.[1] A substantial majority in *every* community regarded rehabilitation of the handicapped as an important problem. (Table 6.1). The respondents in Wise County, a severely disadvantaged Appalachian community, expressed nearly unanimous agreement on the point.

When asked whether they knew anyone who was handicapped, there was little differentiation among the five communities (See Table 6.2). A high of 52 percent of Augusta County respondents reported knowing a handicapped person compared to a low of 42 percent in Norfolk. A very different distribution of responses became apparent when respondents were asked whether they knew of a place in their communities where a handicapped person who needed vocational rehabilitation treatment could go for help (Table 6.3). In the public's view, the disparity in the

TABLE 6.1—Community Attitudes Toward the Importance of Rehabilitation Policy for Local Community

	Areas				
	Cities			*Counties*	
Attitudes(a)	*Alexandria*	*Norfolk*	*Petersburg*	*Augusta*	*Wise*
	%	%	%	%	%
Important problem in community	80	73	85	83	97
Not an important problem in community	13	19	11	13	3
NA: DK	7	8	4	3	0
Total respondents=	(197)	(337)	(282)	(238)	(237)

(a) In response to this question: "Would you say that helping handicapped people so that they are able to work is an important problem in your community?"

SOURCE: Community Survey Data, Vocational Rehabilitation Study, 1967.

TABLE 6.2—Having Information About Handicapped Persons

	Areas				
	Cities			*Counties*	
Responses(a)	*Alexandria*	*Norfolk*	*Petersburg*	*Augusta*	*Wise*
	%	%	%	%	%
Yes	49	42	50	52	46
No	49	55	47	47	53
NA: DK	2	3	2	1	1
Total respondents=	(197)	(337)	(282)	(238)	(237)

(a) In answer to this question: "Do you know anyone who is handicapped?"
SOURCE: Community Survey Data, Vocational Rehabilitation Study, 1967.

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[1] The surveys were conducted in Alexandria, Norfolk, Petersburg, Augusta County and Wise County.

Table 6.3—Knowledge About Where a Handicapped Person Could Go for Vocational Rehabilitation Treatment

	Areas				
	Cities			*Counties*	
Responses(a)	*Alexandria*	*Norfolk*	*Petersburg*	*Augusta*	*Wise*
	%	%	%	%	%
Yes	21	28	40	77	12
No	76	69	56	21	87
NA: DK	3	3	4	1	0
Total responses=	(197)	(337)	(282)	(238)	(237)

(a) In answer to this question: "Do you know of some place in your community where a handicapped person who needs vocational rehabilitation treatment can go for help?"
Source: Community Survey Data, Vocational Rehabilitation Study, 1967.

availability and accessibility of vocational rehabilitation facilities between Augusta and Wise County is striking. In Augusta County (location of the Woodrow Wilson Rehabilitation Center) three out of four respondents could name a local source of vocational rehabilitation treatment, compared to only one in eight of the Wise County respondents. Moreover, public knowledge of local vocational rehabilitation facilities in the three cities was more similar to the Wise County lower extreme than to the high level of awareness evident in Augusta.

Further questioning aimed at learning to what extent our respondents were personally aware of people receiving vocational rehabilitation services yielded particularly interesting results. A very small proportion of the respondents said that members of their families had received vocational rehabilitation services either in Virginia or in another State. However, in four communities, from 15 to 19 percent indicated knowing someone who had received vocational rehabilitation services. Again the Augusta County respondents differed dramatically from those in communities having less visible and accessible vocational rehabilitation facilities.

Public awareness of the vocational rehabilitation program or of vocational rehabilitation services through direct personal contacts proved to be low, so we asked the respondents whether they had ever "read or heard anything about the vocational rehabilitation program in Virginia." The variations in levels of awareness of the Virginia program revealed in the surveys are both interesting and puzzling. The rather high awareness evident in Augusta County may again be assumed to be due to the presence of the Woodrow Wilson Rehabilitation Center. The roughly 40 percent of respondents indicating an awareness of the program in Norfolk, Petersburg, and Wise County is not surprisingly low. Explanations for the relatively small proportion of respondents having heard of the program in Alexandria are probably found in the low caseload and in the low number of vocational rehabilitation personnel there in relation to the population of the area.

It is of central importance to this study to know more about the way the public learns about the program. The relative importance of the three principal sources of information—friends or relatives, radio or television, and newspapers—varied among the communities. On the whole, newspapers appeared to be somewhat more important than radio or television, with personal sources only slightly behind. Alexandria and Augusta again were exceptional. Respondents in Alexandria reported radio and television to be much less important than did respondents in the other communities. Those in Augusta County rated friends and relatives relatively higher as an important information source.

Also the respondents were asked if they felt "that people who work in the vocational rehabilitation program in Virginia should do more to let the public know about their work?" An overwhelming majority in each community felt more should be done to inform the public about the program. *Apparently the public supports the program and feels it should know more about the vocational rehabilitation programs.*

Attitudes Toward Governmental Involvement

The community attitudes reported so far would seem to indicate that Virginians in the five communities are agreed that vocational rehabilitation is a problem of importance in their communities, and that the public should be better informed about the problem. But, do these attitudes translate into consensual support of a greater community effort in the area of vocational rehabilitation? For instance, how favorable are public attitudes toward vocational rehabilitation in general when difficult questions of implementation are introduced? Should such a program be predominantly public or private, or should it be shared by both sectors? And, should the public sector share of the vocational rehabilitation program be financed by the State or Federal government?[2]

To better understand the general orientation which the public thinks appropriate for the vocational rehabilitation program, the respondents were asked whether the program's basic function of "helping handicapped people to perform a new job" is essentially an educational program, or a welfare program. We found substantial majority support (ranging from 70 percent in Petersburg to 85 percent in Wise County) for the view that the vocational rehabilitation program is educational in nature. In fact more respondents in Petersburg and Augusta thought vocational rehabilitation was both a welfare and educational program than thought it was an exclusively welfare program. Given the strong traditional role of the public sector in the field of education, the conclusion that the apparent public perception of vocational rehabilitation as an educational program is another bit of persuasive evidence indicating public support for active governmental participation in vocational rehabilitation.

More explicit evidence to that effect was found when respondents were asked whether it was a good idea for government to help train handicapped people so they could perform new jobs. The respondents were in near unanimous agreement that governmental aid in training the handicapped is desirable. However, one might expect support for an active governmental role to drop sharply when a similar question offered the alternative of expressing a preference for private groups, instead of government, to help the handicapped. But, relatively few respondents in any of the five communities regarded as exclusively private performance of vocational rehabilitation functions as a viable alternative to at least some degree of government involvement. Moreover 28 percent of the Alexandria respondents expressed the view that a mixed public-private approach would be most effective. Support for a purely governmental approach was strongest in Wise County. A more detailed treatment of these data revealed that attitudes favorable to governmental involvement were most common among relatively poor people.

Turning to the question of which level of government the public feels should implement a vocational rehabilitation program, respondents were asked "If a state has a vocational rehabilitation program . . . do you think that it makes any difference whether the State or the Federal government provides most of the money for that program?" No decisive majority in support of either view is apparent in any of the communities, although Petersburg and Alexandria respondents were more likely to feel that the source of funding would make a difference. A plurality of respondents were *not* opposed to the use of Federal funds in Augusta County and Petersburg, and a strong majority were *not* opposed in Norfolk, Alexandria, and Wise County. Opposition to Federal funding was most evident in Petersburg and Alexandria.

These findings yield a very different picture of Virginia public attitudes than many have believed. Rather than a concensus of public opposition to an expanded role for government in general (and the Federal government in particular) there exists a broad public support for a more active and effective utilization of public sector resources in training handicapped persons. The public is aware of the problem and regards the government as the appropriate instrumentality to cope with it. Although fewer than half of the respondents knew specifically about DVR, and even fewer about local vocational rehabilitation facilities, nevertheless the public supports the view that it must be educated and informed about vocational rehabilitation work and services, and, by implication, about what people in general can do to aid in the rehabilitation process.

Like the public, the professional vocational rehabilitation personnel, as well as the clients of vocational rehabilitation in the State have definite evaluations and expectations of the programs. The vocational rehabilitation professional personnel of both the Virginia Department of Vocational Rehabilitation and the Virginia Commission for the Visually Handicapped believe the best program is one which is client oriented and which is capable of providing adequate services for its clients. Both groups feel the Virginia program is improving rapidly, and the rate is quite high for the future.

Unfortunately, neither group articulate any understanding of the difficulty of building the public support necessary to provide adequate current or future finances. When one compares the vocational rehabilitation personnel's replies to that of the general public in the five communities relative to this information problem, it is clear that *the professional personnel underestimate the problems inherent in creating public support for the vocational rehabilitation program.* However, it is clear that the best advertisement for the program is satisfied clients whom the community at large recognizes as such. Perhaps, as rehabilitation facilities are built in several areas of the State a multiplier effect will occur because of the increased visibility of the program. This will produce additional support for the job ahead.

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[2] For a detailed presentation of answers to these questions, see Lewis Bowman, "Views of Government and Private Involvement in Training the Handicapped in Virginia" *University of Virginia News Letter,* Vol. 44 (April 15, 1968), pp. 29-32; and Dennis Ippolito, William Donaldson, and Lewis Bowman, "Negro and White Political Orientation" *The Social Science Quarterly,* (forthcoming, Feb. 1969).

This interpretation is encouraged by the clients' general satisfaction with their treatment at the hands of the vocational rehabilitation personnel and with the services they received. Often potential clients had difficulty in finding out about the vocational rehabilitation programs, but once they found out, they had relatively little difficulty in establishing contact with the Department of Vocational Rehabilitation and in being considered for services.

One evaluation pointed out an inadequate part of the program that deserves special attention because it emphasizes a difficulty in all the vocational rehabilitation and related programs. Many of the clients whose cases were closed from referral and who, consequently, received no services from DVR, said they were not given advice about other possible sources of service. This illustrates a fact which has been clearly demonstrated in several related programs. *The referral systems do not function efficiently either from the standpoint of the agencies nor from the standpoint of the client.*

The clients' evaluations also emphasized several additional points of the program which probably could be improved. Apparently the Department of Vocational Rehabilitation maintains fairly frequent post-rehabilitation communication with only a few of the rehabilitants. Clients were often not very satisfied with the job placement services they had received. Proper follow-up might alleviate some of these problem cases among the "rehabilitated." Many clients felt it took too long to get services. Also, large numbers of clients thought the program was inadequately financed. One very positive evaluation by clients which should be emphasized was their very favorable views of the courtesy and capability of counselors.

A Governor's Advisory Committee

The strong permissive support for the programs on the part of the general public, and the positive images which professions in the field and their clients have of the programs point toward the necessity of providing a continuing nucleus around which support for the VR program can be rallied. One way to meet this need is to create an advisory committee organized on a Statewide and regional (within the State) basis. Such an on-going group could encourage the necessary additional studies of selected aspects of the program, rally grassroots public support, provide the public with information about the programs, and encourage the State's legislators to support the program. Most importantly, it would work to implement the proposals of this Statewide plan by 1975.

Such an advisory committee could be composed of a gubernatorial appointee from each of the seven planning areas in the State plus the Director of CVH and Commissioner of DVR. A regular staff would be necessary to facilitate its work. Regional task forces in each of the seven planning areas would be composed of the member of the Statewide Advisory Committee (who would serve as chairman of his regional task force), six gubernatorial appointees from the area and the district supervisors of the two public VR offices.

Of course, two more specialized public—potential clients and physicians—who are, *or should be,* intimately involved in VR's programs need special attention.

Recommendation (Soon 1): Create a Governor's Advisory Committee on Vocational Rehabilitation with regional task forces and with budgeted staff.

Recommendation (Immediate 6): Develop a public information program to advise potential clients and physicians of the State's Vocational Rehabilitation program.

Continuing Intra-Agency Program Evaluation

For effective planning in the future DVR needs to upgrade its intra-agency data analysis and self-evaluation programs. In order to provide adequate direction for this, DVR needs to upgrade the position of Director of Research and to provide a better data processing program.

Recommendation (Interim 30): Consider upgrading and activating DVR's research position ("Director of Research").

Recommendation (Interim 45): Introduce a fully computerized record-keeping system in DVR.

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